

AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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AMERICAN RAILROAD JOURNAL, &c.

NEW-YORK, APRIL 13, 1833.

We understand that the Ithaca and Owego Railroad Company are about to apply to the capitalists of this city for a loan, upon terms similar to those offered by the Paterson Railroad Company. We understand from a highly intelligent friend, who has been favored with an inspection of a few sheets of the first Report of the Company, now in press, that it appears beyond a question, that the first year's nett proceeds of the road can hardly fall short of 20 per cent. on the amount of capital necessary to complete the work. Prior estimates, indeed, make the amount nearer 30 per cent.; but as the Report is to be circulated at the time that the Company advertise for the loan, they who have investments to make may examine for themselves. The result, however, by no means astonishes those who are at all acquainted with the immense amount of business and travel passing through the region traversed by this road—nor will it surprise any one who is at the pains to inquire into the resources and actual business of the southern tier of counties with their Pennsylvanian connexions.

Few are aware of the fact, that nearly one-eighth of the canal toll was paid, in the year 1829, at the Montezuma Collector's office, which was the revenue office to the Cayuga Lake business; and a New-Yorker would hardly believe that 350 tons of butter and lard leave Ithaca every season for his city! We shall

look with much interest for the appearance of this Report; and, judging from the information conveyed by our highly capable informant, we can hardly conceive more advantageous stock speculations and investments than will be unfolded by its contents. For what can be a more secure loan, than the mortgage of property on which \$165,000 has been expended, for \$145,000 more, to be laid out in completing the work? And how can there be a better chance of speculation, than the privilege at any time, within three years', of converting any part of the loan into stock at its par value?

We predict, that as certainly as the Ithaca Bank divides 10 or 12 per cent. a year, so surely the Ithaca and Owego Railroad Stock will, in three years time, divide 30 per cent. on its capital.

ALABAMA RAILROAD.—At a meeting of the stockholders of the Railroad Company at Courtland, the following gentlemen were elected directors for the next ensuing twelve months, viz: Ben. Sherrod, D. Hubbard, P. W. Taylor, H. W. Rhodes, Jas. T. Sykes, J. B. Wallace, Mr. Leach, D. S. Goodloe, Jas. Elliot, J. L. McRae, B. Merrill, Jas. Fennel, M. Tarver. The officers are, B. Sherrod, President; D. G. Ligon, Secretary; Dr. J. Shackelford, Treasurer; D. Desher, Engineer.

We are enabled to state that a large additional supply of railroad iron is just received from Liverpool, and that other materials are likely to be furnished as fast as they may be required. All that is requisite now to enable the contractors to progress with renewed energy, is a little fair weather. The first annual report of the engineer is now preparing for the press, and will be forthcoming in a few weeks.—[North Alabamian.]

OUR RAILROAD.—The Charleston Mail was delivered in Augusta, on Tuesday morning last, at about 5 o'clock, in 22½ hours after it left this city. The whole distance as now travelled is 145 miles. The Steam Car accomplished the distance of 72 miles in 6 hours, with 3 or 4 tons of iron and several passengers. The Augusta Chronicle of the 27th remarks, that "this is the quickest trip that has yet been performed on the route, and affords an earnest of the future success, and rapidity of travelling, which will be attained when the entire route of the Railroad is completed to Hamburg."—[Charleston Gazette.]

THE RAILROAD.—The two Locomotive Engines, (the "LIVERPOOL" and the "PIONEER,")

lately imported, have been placed upon the Railroad, and, we are pleased to learn, have, from their speed and admirable adaptation to the construction of the Road, given perfect satisfaction. This increased facility will enable the Company to prevent the disappointment which was occasionally experienced by the planter and the traveller, when there was but one Engine upon which to rely for the purposes of transportation.

As an evidence of the power and speed of these Engines, it is only necessary to state the fact that, on Monday morning last, a party of gentlemen left town at half past nine o'clock, in the coaches drawn by the "PIONEER," for the purpose of attending Greenville Court, remained at the Court House about two hours and a half, and returned to town by six o'clock in the evening—the whole distance being 82 miles. When the necessary delays at the several depots are taken into consideration, this trip will, we think, justify the assertion that they cannot "order these things better in France."—[Petersburg. Intel.]

MANCHESTER AND LEEDS RAILWAY.—There is some talk of the revival of this great public undertaking, but the disgust of the gentlemen engaged in the former application to Parliament at the treatment the interests they represented experienced in the committee of the Commons, where one set of members heard the case, and another set, who had not heard it, decided against those claims, forms a serious impediment to the renewed application. Let us hope that a reformed Parliament will have reformed committees.—[Leeds Mercury.]

LONDON AND GLOUCESTER RAILWAY.—The establishment of a railroad between London and Gloucester is contemplated. One tunnel will be necessary, of about two miles in length. The surveys have been made, and it is calculated that, including all expenses, it will take £13,000 per mile to complete it. It is intended to terminate at Paddington.

Newly-invented Railroad.—Our attention has been again drawn to the National Gallery of Practical Science, where there is now exhibiting an Undulated Railroad, recently invented by Mr. Richard Badnall, whereon a locomotive carriage travels with a rapidity far exceeding that of a similar one when moving upon the common or level railroad, the propelling power being the same. The carriage model is worked by machinery, on three differently constructed roads; and the object is to prove, that a much less power is required to obtain the same speed on the undulating than on the level road, and of course, that, by availing ourselves of the irregular surface of the ground, railroads may be constructed much cheaper than heretofore, and with an evident advantage in the lighter construction of the engines and the consumption of fuel.—[London paper.]

On City Railways and Water-Works, and Some Account of the Application of Steamboats to assisting Vessels over Shoals. To the Editor of the Railroad Journal.

Your widely circulating Journal may bring the following description of Mechanic Improvements within the knowledge of some persons interested in their use.

I think it will be soon found that where Railroads of great extent terminate in cities at one place, inconvenience will attend the management of the business. Most of the loading will be the produce of the soil—of mines and of manufacturing industry—increased in value by so much as may be saved in the transportation. The following modification of a city railway and carriages will probably be found convenient. At present I propose to give their outline and effects; and in a future number, the details, with a plate, should it be found desirable.

The carriage must have the usual properties of the railroad waggon, its stiffness and flanchess—and of the city carriage, its flexibility and tire. It must now run on an edge rail, and now on the street: the rails must change their principle at the point, where the locomotive engine stops, and the horse is attached to convey each carriage to its destination.

On this city track, into which the other suddenly changes, the wheels run on their flanches, somewhat widened, and formed of wrought iron, guided by the horse, who has his path marked out by its depression between the rails, and being a little on one side the middle, and his shafts shifting a little to conform to it; NO OTHER carriage travelling with its horse in the same path will run on the rails.

One track will answer, if the contiguous pavement and the middle is smooth paved, with cemented fragments, so that the carriages going in opposite directions may turn out for each other. The ordinary travel may be expected to give place to railway carriage for the moment they are passing, as when it enters on the city track, it becomes a city carriage; its forward axle must be capable of taking various oblique relations to the perch, turn corners, and follow wherever the track leads—when, to return, the shafts are shifted to the other end—the now hind axle is fixed, and the other released—and on reaching the railroad, both are secured square. But while on the railway of the city, the wheels must revolve independently of each other, yet retain the advantage of fixedness on their axles, and of the friction saving apparatus belonging to them. The model will satisfactorily exhibit the consistency of these properties.

The iron rail may be about six inches wide, nearly flush with the surface of the stone line. It will be of consequence that the street should be kept clean where a flush track is placed along its centre, and with this view tubes may be sunk on the higher parts of the street to raise water from the deep rock veins that are found under each of our three principal cities, and the general cleanliness of the street would be the consequence.

Indeed, the whole street would be improved, as it is likely the systematic pavement required in setting the track would so contrast with the rough slight mode now customary, that before long it will be relinquished, as this branch of public expense is susceptible of much more economy in this perfect way in the long run.

According to the several charters already granted, there will be four great railroad routes from this city. The business of three of them must cross the ferries, and will more conveniently do so in the same waggons to enter on distributing railways.

In the competition about commencing be-

tween our great sea-ports for the western trade, New-York will be under some disadvantage. The financial power of the state government sustains Philadelphia; here the public spirit of the moneyed interest is alone relied on. This is strong indeed, if united; but just calculation must do this. There must be no sacrifice of interest, but certainty of ample recompense—and this the Legislature may make certain by liberal charters. There is no other way of uniting capital in public works but this; and this is the best way, especially if the state and city take a part of the stock, and the undertaking is a perpetuity, with banking privileges.

It is calculated that about ten millions are accumulated in this city annually. A considerable amount also comes from Europe, and not a small sum is ready to come here from other parts of our country. Perhaps there is to be no better form of property than the few railroads that are to be, or can be made from this great centre of commerce, as they must bring the bulky produce of the soil and the coal mines, and carry back direct, and therefore cheap, large returns of merchandize.

This growing city, thus to become the centre of American commerce, is still however unsupplied generally with that article of prime necessity, pure water; and yet no city in the Union might be so fully and agreeably supplied. Having mentioned the expedient for keeping the proposed railway clean, I will with your leave, go a little further into the explanation of that subject, referring to my recent publication, which contains the results of surveys, geological maps and considerations, which go far towards showing that this city must mainly rely on its deep subterraneous sources.

The range of stratified rock which affords this fine water happens to cross this city. It is about seven miles wide in the county of Berkshire, Massachusetts, and comes to the surface in strata dipping westward; it yields excellent water there when the wells are excavated into it. From thence it is distinctly traced along the west of the Housatonic, between the Croton and Bronx, giving out copious springs, which, in fact, form the ponds at the head of these streams; continuing southward it forms the greater part of this island, and here gives forth the large quantities which the great well contains, and which the perforation of these strata, by Disbrow's powerful instruments, affords. The range then passes under the Hudson, and most of New-Jersey, and at Philadelphia and Baltimore again re-appears, and affords there, also, the same fine water, free from all mineral taint and hardness.

Therefore, however otherwise the public munificence may finally decide to bring water for public uses into this city, here is a method which, at moderate expense, will afford a sure supply to families.

The required capital to give it liberally and cheaply to the whole city, can only be embodied under an incorporated company, with banking privileges, which would have probably been obtained the present session, had there not been unexpected impediments in the contrariety of opinion prevalent on the subject. Delay cannot, however, change the facts ascertained. They are in the nature of this kind of rock, and will, with the patented instruments, which reach and raise it at one-tenth the expense of excavated wells, be the foundation of an application to the Legislature the next session—for which the company will now forthwith begin to form, by the aid of philanthropic individuals, and probably operate, trusting that the guardians of the public weal will not refuse to concur, to sanction, and even to join in the work, as there can be no reasonable doubt that this must be the mode of supply. The surveys have shown, with the practical considerations I have pointed out, that the head of the Byram is not and cannot be ours; nor, were it so, is it worth the expense of obtaining under such uncertainties. I have shown that the Bronx is, in summer, a small stream, enough only for one

mill, and runs too low to flow onto this island, except the northern plain, which will want it by-an'-by, as much as the southern alluvial part of the city—and could, with the best management, afford here only enough for washing the streets; the Croton does not lay high enough to be brought with the required slope onto this island, and is a very inadequate and uncertain source even at great expense: all which leads me to think that the rock water veins, as natural aqueducts, will be preferred; and were the city corporation, after success, to have the power of always increasing the stock as much as they might choose to put in, to extend the supply, the city would at length hold a predominant part, as well in the proposed bank as aqueduct, and thus in time derive a profit that would diminish taxes or sustain charitable institutions. But I do not see, as patentee (with Mr. Disbrow) of these instruments, how this is to be done, without a beginning, by a chartered company, to embody the capital required for the first ten or twelve years. There must be a private interest concerned in the general extension of the supply. Whoever will read Col. Clinton's Report, and especially my Supplement, with the quotations from it, will be convinced that this city cannot be otherwise very soon accommodated, generally, with good water.

But were it otherwise, when a boring that cost \$1,000 gives water enough for 600 families—and when one that would now cost \$5,000 gives enough for 2,000 families—it can scarcely be considered a doubtful operation as to quantity.

The Common Council, however respectable individually, is not a sufficiently permanent body, personally, for great undertakings. We have seen it to be necessary even to commit the investigations to a commission, and Philadelphia appointed her permanent Water Committee. A company, therefore, in which the city and state may take stock, and that may be carried through by one Board of Directors, is the best plan.

Having thus described two improvements applicable to use in our central cities, I will ask leave to mention another likely to be useful in some places at the south, and on the North River.

Having an interest in the general adoption of the late improvement in Steamboats by Blanchard, well known as a very successful mechanician, it has, in perceiving the troublesome delays at the Overslaugh Shoal, below Albany, occurred to me that it would be easy to apply the power of the steam-engine in this kind of boat, to the lifting up and carrying vessels over shoals.

This kind of steamboat is exceedingly light, stiff, and strong, and carries her impelling wheel in the stern, and operates very powerfully in ascending several of our most rapid rivers.

With two of them I form the steam camel. Between them a cradle of covered chains receives the vessel to be raised. The boats have each two masts. The engines draw these masts towards each other, heeling the boats inward. The chains are at the same time wound up. On releasing the masts the buoyancy of the steamboats lift the vessel, or barge, with the reaction of all the power used in producing it. The three now share the load. This machine is probably applicable to the shoals of the Delaware, and the bars and shoals of some of the southern rivers in North Carolina and Virginia. This sort of boat is peculiarly well suited to the Lake navigation, carrying her impulse in the stern, and being capable of great length, with strength, and of sailing on a wind, yet using her engine.

These three improvements may be the subject of contracts, into which I am disposed to enter, as having a legal special privilege for a long time to come, relative thereto.

JOHN L. SULLIVAN, Civil Engineer.
New-York, April 6, 1833.

Manufactories, Botanic Garden, of Liverpool, and Railway connecting Liverpool with Manchester. By B. P. [From the New-York Farmer and American Gardener's Magazine.]

Liverpool, though situated in the most extensive manufacturing county in the kingdom, is not in itself, properly speaking, a manufacturing town, still many branches of manufactured articles are on an extensive scale, viz. Potteries, breweries, foundries, &c. The making of files, watches, watch movements and tools used by watch makers, is carried on to a greater extent probably in Liverpool and its environs than in any part of the kingdom. There are also extensive manufactories of chain cables, anchors, steam engines, &c. There is also an establishment for glass staining in landscape, figures, or ornaments; the art is brought to a high degree of perfection, and has a most beautiful effect in church windows.

The Botanic Garden is pleasantly situated in the environs, and is enclosed by a stone wall with two ornamental lodges at the entrance, and a very large conservatory. It appears to be under the eye of those who have not only the taste but the means of gratifying it, as every thing appears to be of the most permanent construction. The taste for botanical studies, and the establishment of such a fine garden as that at Liverpool, is worthy of imitation by every large city. To describe the contents would be tedious; suffice it to say, the garden appeared to contain every species of useful and ornamental fruit or flowers. Strangers are admitted by taking a note from any of the directors to the superintendent.

Liverpool abounds in fine public buildings, charitable and literary institutions, several fine monuments, &c. but I pass over them to give you a short description of the railway which connects it with Manchester, and which is probably one of the most stupendous undertakings of the age. The work was commenced in June, 1826. The entrance commences in Wapping, near the Docks, and passes under the town in a gentle curve to the right or south-east, till it reaches the bottom of the inclined plane, which is a perfectly straight line 1,980 yards in length, with a uniform rise of $\frac{1}{4}$ of an inch to a yard. The tunnel under the town is 22 feet wide and 16 feet high, the sides being perpendicular for 5 feet in height, surrounded by a semi-circular arch of 11 feet radius—the total length is 2,250 yards. It is whitewashed throughout, and illuminated with gas. At the upper or eastern end of the tunnel, the traveller emerges into a spacious and noble area 40 feet below the surface of the ground, cut out of the solid rock, and surmounted on every side by walls and battlements. A massive Moorish archway stretches across the road, close by the engine houses, which are employed in the generation of steam power to draw goods from the mouth of the tunnel in Wapping, and the carriages with passengers through the tunnel on their return from Manchester. Crossing the street the road descends for five miles and a half at the rate of 4 feet in the mile. At a little distance it is carried through a deep marl cutting, under several stone arches, beyond which is the great rock excavation through Olive Mount; the depth is 70 feet.

A night journey through this artificial ravine must be highly interesting and sublime; a few minutes suffice to carry the traveller to the magnificent embankment between Broad, Green, and Roby, which in fine weather presents a portion of the most interesting and varied landscape which meets the eye during the journey to Manchester. On the right a superb line of trees partially bound the view for some distance, when Childwall Vale bursts upon the sight, with its gently rising green slope; on the side of which the church peeps through the trees, and forms an object of uncommon interest; its dark red color firmly contrasting with the masses of fine green foliage by which it is surrounded.

"The land was beautiful:
Fair rose the spires, and gay the buildings were,
And rich the plains."

The Abbey of Childwall and its grounds display themselves still farther in the rear; Roby Hall and domains, with the richly wooded townships of Little Woolton and Halewood, the lofty back ground of Runcorn in the distance; on the left, Summer Hill and its beautiful grounds, a richly cultivated country, broken up into picturesque variety by the nature of the ground and the varied bodies of foliage and forest scenery which mark the sight of Knowsley Hall, a glimpse of which may be caught *en passant*. The venerable tower of Huyton Church rising above the trees seems to dispute the way in front, whilst the spire of Prescott Church forms a conspicuous object a little more to the left. On the summit of the hill, eight miles from Liverpool, begins the inclined plane at Whiston, which rises at the rate of $\frac{3}{4}$ of an inch in a yard, and is a mile and a half long. About half a mile from the top of this plane the turnpike road from Liverpool to Manchester crosses the line of the railway, by a substantial stone bridge of very curious mechanical construction. We then soon come to what is called Parr Moss, the depth of which is about 20 feet; and here the material forming the railway, as it was deposited, sank to the bottom, and now forms an embankment in reality 25 feet high, though only 4 or 3 feet appear above the surface of the Moss.

The borders of this waste are in a state of increasing cultivation, and carrying the railway across this Moss will hasten the enclosure of the whole area. Leaving Parr Moss the great valley of the Sankey speedily breaks upon the sight, with its canal at the bottom. Over this valley the railway is carried along a magnificent viaduct of nine arches, each 50 feet span, the height from the top of the parapets to the water in the canal being 70 feet, and the width of the railway between the parapets 25 feet; from this spot a splendid prospect of the country is obtained, with the meanderings of the canal through a richly wooded country, where the vessels which navigate the Mersey may frequently be seen moving along the canal, impelled by the wind apparently through fields, with all their canvass set, amidst trees and rising grounds, forming a view at once unique and picturesque—whilst the most distant part of the landscape, Newton race-course, and a luxuriant back ground, on the left, with Barton wood, Winwick spire, and all the varieties of a rich agricultural country, embracing the lonely vale through which the canal runs towards the Mersey, on the right, presents a scene on which the eye delights to rest. A distant view of Warrington with the upper reach of the Mersey and Helsby Hills in the distance, form prominent objects. On the other side of Newton is the great Kenyon excavation, near the end of this cutting the Kenyon and Leigh junction railway joins the Liverpool and Manchester line, pointing to the two towns respectively; this railway, at the same time, by means of the Bolton and Leigh line, perfects the communication between Bolton, Manchester and Liverpool. Beyond Bury-lane and the small river Gless or Glazebrook, lie the borders of the far-famed Chat Moss.

This barren waste comprises an area of about 12 miles square, varying in depth from 10 to 35 feet, the whole Moss being of so spongy a nature that cattle cannot walk over it, but it is now under a process of draining and cultivation: over this morass the road is carried. There is little of interest in the scenery except on the left, Worsley Hall and grounds, Tidsley Church, with the back ground of Billinge Hills. Having accomplished the passage of the moss and traversed the Barton embankment of about one mile, the railway crosses the Worsley Canal, and here the traveller first sees indications of a manufacturing district. Cotton factories begin to appear, and as the road approaches Manchester the scene acquires additional interest from the presence of several country seats. The immediate approach to Manchester is through Salford, over the river Irwell; a very handsome stone bridge and a series of splendid

arches finally conduct the railway to the Company's station. The bridges alone, exclusive of the culverts and foot stages, are sixty-three in number, which have cost the Company £99,065 11s. 9d. As an instance of what may be accomplished by the railway, the following is annexed, which took place in February 1831.

The Locomotive Engine, called the Sampson, started from the tunnel mouth with thirty loaded waggons, occupying a line of 120 yards long. The weight of the whole was as follows:

	Tons.	Cwt.	Qr.
Net weight of Oats and Sacks	82	10	0
Do. of Merchandize	24	15	0
Do. of 15 persons	1	00	0
	108	5	0

She performed the journey to Manchester, a distance of twenty-nine miles and three quarters, in two hours and thirty-four minutes, including a stop of thirteen minutes for taking in water—her greatest speed was twenty miles per hour, and the average about twelve miles per hour. Although the railway cost £820,000, equal to \$3,630,800, still the profits are such that the shares bear a very high premium. The arrival of an American in a place like Manchester is generally attended with unpleasant sensations; the coach generally leaves passengers at the "Bridgewater Arms," an old inn, and more worthy of a preference from its antiquity than its excellence. A little observation will soon learn a traveller that passengers arriving in the coaches do not receive the attention that those who come in a post chaise or private carriage do. Appearances often command respect and attention even in our republican country, and in all countries often take the place of worth.

Manchester is larger than Liverpool, and is second only to the metropolis. Many of the dwellings and warehouses are built on narrow and crooked streets, principally of brick, of a very dusky hue, which is much increased by the coal smoke from the numerous manufactories and dwellings, hence they have a dark and gloomy appearance, which is much increased by the very frequent rains which fall in Manchester, and which are attributed to the mountainous regions in the vicinity. Few places are less interesting than Manchester, excepting always her manufactories; and the misery, want and wretchedness of the operatives would almost make one wish that manufactures had never advanced, and ancient modes of the wheel and distaff been confined to private families as formerly. A writer remarks, that of the thousands that throng Manchester, crowded together in narrow streets, where the everlasting din of machinery is heard, you scarcely see a person whose appearance bespeaks comfort. However, we saw some interesting objects, which I will describe in my next.

Yours truly, B. P.

THE CHIRAGON, OR GUIDE FOR THE HAND.

—Mr. Wm. Stidolph, a schoolmaster at Blackheath, has invented an apparatus to which the name of Chiragon is given; by the assistance of which, a person who has become blind after learning the art of writing, may continue his practice without the risk of confounding words or lines together. It consists of a frame, with a raised margin, upon which margin is placed a narrow piece of wood, having a groove to receive a corresponding key that is attached to a collar or bracelet for the wrist. In the sides of the frame series of notches are cut, into which the grooved piece of wood is placed successively so as to form the regular intervals between the lines, whilst the hand is permitted by the collar to pass freely from the left to the right, but is confined to certain limits in its action up and down, or in the direction of the length of the paper used. The wri-

ting is effected with Mordan's patent pencils; and we have proved the efficiency of the invention, by writing a letter with its guidance while our eyes were bandaged so as to exclude the sight of every object.—[Athenæum.]

Who first invented Steamboats. By ROBERT LYON. [From the London Mechanics' Magazine.]

In the Penny Magazine of the Society for the Diffusion of Useful Knowledge, there appeared lately an article extracted from an account published at New-York, awarding to Robert Fulton, of America, the right and merit of being the original inventor of steamboats. Knowing as I did the complete falsehood of the thing, I wrote them, and asked them if the dissemination of a notorious falsehood was the diffusion of useful knowledge? If so, I had nothing to add; but, on the other hand, if the correction of falsehood were a matter of any consequence to them (as I give them credit for not wilfully sinning), I would put them right. To make surety doubly sure, I referred them for proof to the Journals of the Royal Society of London, where they would find ample proof that they were not only doing a very great injustice to their own country, but likewise to the memory and family of the deceased Mr. William Symington, who was the man who had taught Fulton how to construct the machinery to impel vessels by steam.

What then must have been my surprise, Sir, when a Society, at the head of which is Lord Brougham, in place of referring to home documents to correct a most palpable falsehood, after some delay, and in a most flippant manner, replied to my communication by saying, they were content to let the matter rest as it was, as Judge Story's account of the matter from New-York was fully sufficient for them—the plan of their work not permitting them to sift out the truth.

Desiring most sincerely, Sir, that right alone should prevail over might, is the wish of

ROBERT LYON.

Willowfield, Upper Clapton, Middlesex,
December 24th, 1832.

SCHOOL STATISTICS.—About one third of the population of a country are between the ages of three and sixteen or eighteen; and of course are the proper subjects of school education.

In the United States, more than four millions of children ought to be under the influence of schools.

In Maine, the law requires that the inhabitants of every town pay annually, for the support of schools, a sum equal, at least, to 40 cents for every person living in it. That amounts to about \$120,000. Their expenditures are more than \$140,000.

In New-Hampshire, a separate tax of \$90,000 is raised for schools, besides an annual appropriation from a tax on bank stock of \$9,000 or \$10,000.

In Vermont, more than \$50,000 are raised for schools, from a three per cent. tax on the grand list, and as much more from district taxes, besides an income of nearly \$1,000 from banks.

In Massachusetts are nearly three thousand schools, supported by public taxes and private subscriptions. In Boston, the schools contain more than 12,000 children, at an expense of about \$200,000.

In Rhode Island are about 700 schools, supported by a legislative appropriation of \$10,000 annually, by taxes and by private subscriptions.

The Connecticut school fund is nearly two

millions, but fails of its desired object. Children in the state, 85,000; schools about 1,500.

In New-York are more than 9,000 schools, and over 500,000 children taught in them. School fund, \$1,700,000; distributed annually, \$100,000, but on the condition that each town raise by tax, or otherwise, as much as they receive from the fund. A wise provision.

New-Jersey has a fund of \$245,000, and an annual income of \$23,000.

In Pennsylvania, during the last year, more than 250,000 children, out of 400,000, were destitute of school instruction.

Delaware has a school fund of \$70,000.

Maryland has a school fund of \$75,000, and an income for schools from the banks, which is divided between the several counties.

Virginia has a fund of \$1,233,000, the income divided among the counties according to the white population, and appropriated to paying the tuition of poor children, generally, attending private schools.

North Carolina has a fund of \$70,000, designed for common schools.

South Carolina appropriates \$40,000 annually to free schools.

Georgia has a fund of \$500,000, and more than 700 common schools.

Alabama, and most all the western and southwestern states, are divided into townships, six miles square, and each township into sections one mile square, with one section, the sixteenth, appropriated to education.

Mississippi has a fund of \$280,000, but it is not available till it amounts to \$500,000.

The Legislature of Louisiana grants to each parish, or county, in that state, \$2 62½ for each voter, the amount for any other parish not to exceed \$1,350, nor to fall short of \$800.—\$40,000 are applied to educate the poor.

Tennessee has a school fund of about half a million, but complaints are made that it is not well applied.

Kentucky had a fund of \$140,000, but a portion of it has been lost. A report to the Legislature, from the Rev. B. O. Peers, says, that not more than one-third of the children between the ages of four and fifteen attend school.

In Ohio, a system of free schools similar to that of New-England is established by law.

In Indiana, Illinois, and Missouri, no legislative measures for the support of schools have been adopted. All the schools are supported by private tuition.—[Family Lyceum.]

On a Means of effecting an Useful Continued Motion. By J. GORRIE. To the Editor of the American Mechanics' Magazine.

It is in the nature of things that he who under any circumstances attempts an object that has been deemed of impossible attainment, will subject himself to the charge of presumption. If it is an object that has engaged and eluded the ingenuity and wisdom of men for ages, he will be accused of arrogance in supposing that he alone possesses knowledge superior to the rest of mankind. In endeavoring to persuade his fellow men of his success, he must not only encounter the intrinsic difficulties inseparably connected with every such attempt, by vanquishing or preventing objections which naturally present themselves to the most dispassionate understandings, but he must overcome the objections by which the judgments of men are disturbed at the first glance of such a pretension. The doubts of the sceptic, and the shafts of the satirist, are principles always enlisted against such propositions; for there is an almost uncontrollable propensity to persuade ourselves that what has never been found never will appear, and that nothing but folly would look for it. But while it would certainly be characteristic of weakness to admit any proposition, however gravely or plausibly advanced, without due examination, it no more follows, as a true consequence, that he who proposes it is a wild and visionary projector, than it does that he who ridicules it is a wise and practical philosopher.

The failure of the countless schemes for ef-

fecting an *useful* continued motion makes me deeply sensible of the good foundation for the doubts which will attend every plan for such an object, and of the necessity of removing preconceived prejudices. With the view of removing these obstacles I have made the preceding remarks; and I shall now call the attention of the reader to the means by which my plan avoids the errors that have caused the failure of its predecessors. Unlike all the plans of which I have seen or heard, I make no attempt by combining the simple mechanical powers, or by any application of magnetism, galvanism, gravitation, or the other *unvarying* laws of nature, to create a moving power, but have simply taken advantage of a well known and ever active, though varying, law of nature, to produce a mechanical effect. My project has occurred to me from a plain process of ratiocination on the principle and uses of the *thermometer*; and is, indeed, nothing more than a modified thermometer on a very large scale, with a more expansible fluid than is commonly used. This is not the first time that the plaything of the philosopher has become an instrument of utility and power in the hands of the mechanic.

It is an axiom of mechanics that "whatever communicates or tends to communicate motion to a body is a mechanical force." It is indisputably admitted that all bodies are enlarged on receiving accessions of heat, and in this process of enlargement they exert a mechanical force, and any obstacle which opposes this enlargement sustains an equivalent pressure. This force, when derived from solids, and more particularly from fluids confined in a limited space, may be produced to almost any degree of intensity, by the simple operation of the changes in atmospheric temperature. From this very simple though obvious source of power, I found my theory of a "perpetual motion"; and which I hope to prove, logically, is incontrovertible in its practical application. To this I may add, that I have constructed a machine, rude, it is true, from the absence in this part of the country of mechanical skill of the kind required, but sufficiently accurate to verify the correctness of the principle.

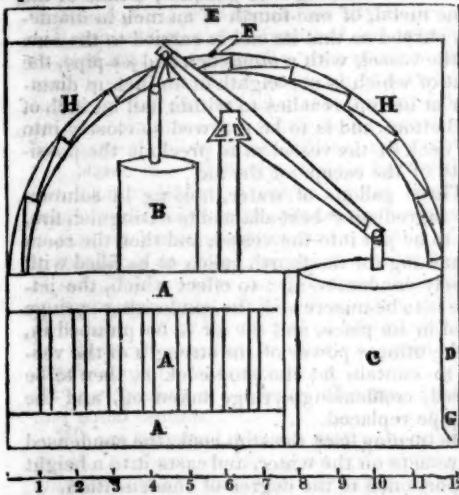
From an examination of a series of thermometric tables, I found that the average change of temperature, or the range of Fahrenheit's thermometer, from the minimum to the maximum, in this country, in the shade, was about fifteen degrees for every day in the year. Experiments on the expansibility of liquids show that ether, alcohol, and the oil of turpentine, (the fluids of the common kind that undergo the greatest changes in these respects,) are expanded six cubic inches in every one hundred cubic inches, on an exposure to an increase of 90° of heat, and consequently sustain an equal diminution of bulk under an equal diminution of temperature. If we employ a gallon of either of those fluids, it will, under the operation of the above laws of nature, undergo an average daily expansion and contraction of 2.74 cubic inches, which, if made to act upon a piston in a cylinder of one inch in diameter, would elevate, and the pressure of the atmosphere would depress it, about three and a half inches daily.

This is the power. It is necessarily of an irregular and intermitting kind, having, with the exception of the numerous daily fluctuations (which would each operate as a moving power) an interval of twenty-four hours between each exacerbation of action; but to convert it into an uniform and continuous motion, there are numerous means obvious to every practical mechanic. The grand object being obtained of moving a piston spontaneously in a cylinder, it will be no difficult matter to apply that power by a working beam, spring, or various other ways, to any mechanical purpose.

In the machine which I constructed, of which the attached figure is a roughly drawn elevation, I have applied the piston to a beam, the farther end of which works a pump large enough to receive thirty pounds of quicksilver.

This quantity of mercury is elevated through a tube by the action of the piston, cylinder B, to a cistern twelve inches above the bottom of the pump, and thence is discharged through a graduated orifice, in a small continuous stream (so as to give uniformity of motion) upon an overshot wheel. Reasoning from the comparative incompressibility of fluids, I consider that there is afforded, by the average daily expansion of a gallon of alcohol, and power enough to elevate, not simply thirty, but three hundred or more pounds, of mercury, twelve inches high; while if we give it, as I propose, a practical application to a common clock, the daily elevation of ten pounds will be sufficient to keep it in "continual motion."

It is obvious that the cylinder, &c. must be adapted in length to the varying bulk of the expansible fluid in summer and winter.



REFERENCES.—A A A, a vessel consisting of 2 common receivers and tubes, (48,) enough to hold a gallon of an expansible fluid. B, a cylinder with a piston, on which the expansion of the fluid in A, produced by change of atmospheric temperature, is to act. C, a pump, with a valve opening inwards, (not seen in the figure.) D, a tube, up which mercury is to be forced by the pump C, into the cistern E. F, a graduated orifice, for discharging the quicksilver on the overshot wheel, H H. G, a valve, to prevent the retrogression of the mercury into the pump C.

That this principle will fulfil the expectations generally entertained of a "perpetual motion," I do not expect, but that it affords a source of power sufficient for the purpose, I have received a sufficient demonstration; and that it can be made an useful improvement in mechanics, no objection has been presented that gives me reason to doubt. It is as yet scarcely more than an incipient idea, having received but a slight examination of one mind, and that not accustomed to such operations.

Columbia, S. C. March 11, 1833.

NEW-YORK, March, 1833.

To the Editor of the Mechanics' Magazine:

SIR,—In your last number you have given an account of Russell's Hydraulic Press, copied from the London Mechanics' Magazine, and put forth there as a recent invention. I beg to inform you that I assisted to construct a press on the same principle, in June, 1827, for Mr. Ward, Tallow Melter, in Third street, in this city, where it is now in use, and has been ever since that period. Now I think that sufficient notice has not hitherto been taken of inventions that have been made in this country. I am an old countryman, and I can assure you I have every disposition to do all possible justice to Brother Jonathan, and I do hope that in this instance, as well as in all others that come under your notice, you will not fail to make public the claims the people of this country have for ingenuity and industry in all that appertains to the Useful Arts. There is some trifling difference between the press at Mr. Ward's, and

that of Russell's, as described in your last—but nothing that affects the principle; however, on that head you can satisfy yourself by seeing it. I am, Sir, your obedient servant,

A MECHANIC FROM SCOTLAND.

[We have seen the press alluded to by our esteemed correspondent, and certainly it is constructed exactly on the same principle as Mr. Russell's. There are several in operation in this city, but we believe none of them have the railway attached, which is a great acquisition. It does not exactly appear that the Editor of the London Mechanics' Magazine, or his correspondent, Mr. Russell, who claims to be the inventor, has put it forth as a very recent invention. Mr. R. in his letter says, that he "has made and constructed several presses of this description," but he does not make us acquainted with the period when he made the first—although as far as we can gather from his letter he claims the invention. That similar presses have been in use here for the last seven years is quite certain, and, the probability is, much longer. We should be sorry to call in question the claims of Mr. Russell, but we have had several communications of a similar nature to that of a *Mechanic from Scotland*, and most of them claim the invention for America. Our only wish is to elucidate the truth, and perhaps some of our correspondents can assist us in the attempt.—ED. M. M.]

INTERESTING CHEMICAL DISCOVERY.—A singular and highly important discovery has recently been made by Messrs. Capron & Boniface, chemists, at Chaillot, in France. By a process which they keep secret, and to which they have given the name of "Mummification," they have succeeded, after passing a number of years in experiments, in so modifying and perfecting the known processes of preserving bodies, as to reduce them to mummies, leaving all the forms unaltered. All the elements of disorganization which show themselves in the human body so soon after death are completely destroyed, and not only the external body, but all the viscera, the lungs, the heart, the liver, and even the brain, are perfectly preserved; the features also remain so perfectly uninjured, that correct portraits may be taken at any length of time after death, and, as the body is not enveloped in bandages as in the Egyptian method, the natural forms are perfectly preserved. The operation requires but few days, after which the dead bodies may be preserved in a room or vault, or interred in the ordinary way, without being accessible to worms. They may also be exposed to all the variations of the air, either in a standing or sitting position, without undergoing any alteration.

NEW METHOD OF COMPUTING THE MOON'S DISTANCE FROM THE EARTH.—The data on which the computation is made are the Moon's sidereal period, and the force of gravity on the earth's surface. The force of gravity on the earth's surface, as ascertained by the pendulum, is sufficient to make a heavy body descend in vacuo about 16½ feet the first second of its fall. From this fact can be easily ascertained what the sidereal period of a body would be, revolving round the earth in vacuo, one semidiameter of the earth from its centre.

When this sidereal period is ascertained, then take the moon's sidereal period, and say, by the Rule of Three: The squares of these two periods are to each other, as the cubes of the distances from the earth's centre.

We have made the computation, and find the moon's distance to be about sixty semidiameters of the earth from its centre; which corresponds with the general computation founded on the moon's horizontal parallax.

POTATOE PASTE.—Mash boiled potatoes very fine, and while they are warm add a sufficient quantity of butter to make them hold together; then, before the paste gets cold, flour the board to prevent it from sticking, and roll it to the thickness wanted.

ANIMAL POWER.—Dupin states, that in Great Britain the animal power is eleven times as the manual power, while in France it is only four times as great. Also, that Britain consumes three times as much meat, milk and cheese, as France. In Hanover there are 193 horses to every 1000 inhabitants, 145 in Sweden, 100 in Great Britain, 95 in Prussia, 79 in France.—[Bull. des Sc. Agri.]

LOCOMOTION WITHOUT STEAM.—On the 23d of last month, Mr. Hoffman, an engineer of Dantzic, made a first experiment with his newly invented machinery for driving paddle wheels without the application of steam.—Several friends accompanied him in his trip, which his little vessel performed to admiration, though at a somewhat slow rate. We are told that the mechanism, by which the wheels are impelled derives its power from quicksilver instead of steam.—[Morning Herald.]

THE MECHANICAL ARTS.—Next to Agriculture, in point of necessity and usefulness, should be regarded the arts of mechanism. Who is more deservedly entitled to our respect and a rich pecuniary reward, than he who can so control the properties of motion, and calculate velocities so as at once almost to annihilate time and space? than he who is enabled, by the force of the elements themselves, to convert all, that is within reach in nature, to the most advantageous purposes—either to assist man in his enterprises, by supplying his weakness, or to satisfy his wants, or contribute to his convenience?

While our country abounds in the variety of materials necessary to be wrought by the ingenious mechanic into labor-saving machines, and while this supply of materials affords him, of ever so humble means, the required facilities of accomplishing the most surprising works within the compass of human agency, it offers, also, a stimulus to the capitalist to encourage the highest degree of perfection in machinery, for the economy of labor, of which the modifications of the mechanic powers are susceptible.

The vast extent of our territory; its cheap and luxuriant soil, inviting by the salubrity and variety of its climate, to all who may choose the honorable calling of husbandry, with a sure promise of a rich reward, renders nugatory the objections of some, that human labor will be out of demand. In this government, at least, while the best of wild lands, at a nominal price, are accessible to all, industrious and ingenious mechanics will never go unrewarded because machinery is too plenty.—And no other country offers the same reciprocal assurance of success in the cardinal pursuits of human industry; the field of our agriculture has no known limits; our commerce, resting on the industry and enterprise of a republican people, looks boldly to countries the most remote; while the motto over the entrance of our manufactories is "Onward." Already may it be truly said of the American Mechanist, as it was by the Grecian—Give him but a fulcrum and he will move the world.

With the ardent mechanist, a thorough knowledge of mechanical laws, and a power of referring effects to causes, and vice versa, which always depend upon and lend to each other reciprocal aid, is the basis of improvement and discoveries; and a judicious adaptation of materials, and a scientific combination of forces, constitute the perfection of his art.—[Syracuse Argus.]

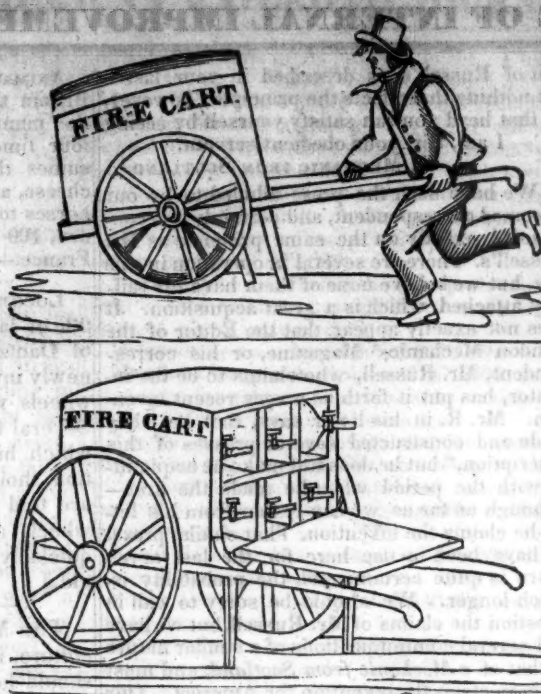


A Plan for the Speedy Extinction of Fires.
[From Captain Manby's Circular to Insurance Companies in England.]

It must be obvious that the ready extinction of fire depends entirely on the facility with which water is brought to act upon it at its commencement; and that, when left uncontrolled during the delay of engines arriving, the procurement of water, and the further delay of getting the engines into full action, it reaches a height at which its reduction is highly doubtful, and at least very difficult. Many instances of destruction by fire have been caused by obstructions to the conveyance of engines to the spot, or from the impossibility of procuring water to enable them to act when they have arrived; and in every case some delay necessarily takes place in preparing the engines, even when water is at hand. It is a well-known fact that many of the great and destructive fires in London and other large towns, where water-pipes are laid, might have been controlled if water could have been obtained in time. In towns not so provided, villages, the detached residences of gentlemen, and other buildings in the country, the want of water at hand, or other means of extinction, makes their total destruction in case of fire almost inevitable.

From observations which I have made in witnessing fires, and from information of those persons constantly employed on such occasions, I am assured that a small quantity of water, well directed and early applied, will accomplish what, probably, no quantity would effect at a later period. This has excited my attempts to provide some prompt and efficient means by which the anxious and often important interval of delay would be obviated, and the fire opposed on the first alarm, thereby not allowing the flames to increase in fury; which so often occurs, that the efforts of the fireman are exerted rather with the hope of preventing the extension of the calamity to other buildings, than to save that in which it first broke out.

To attain this object, I propose a Fire Cart of light construction, requiring but one person to convey it to the spot, and apply a fluid, in the most efficacious manner, from portable vessels or engines, on a principle very long known—the artificial fountain in pneumatics. The engines are to be kept always charged, and one when slung across the body of a watchman or servant is easily carried to any part of the building, however difficult of access. The management required is simple: for on opening the stop-cock, the pressure of condensed air instantly propels a stream that can be directed with



the most exact precision on the part in combustion,—a circumstance extremely important, when the incipient fire is not within the reach of effort by the hand, and when the air, heated by the flames, prevents approach to cast water upon it by common means.

Every fire, even the greatest, must arise from small beginnings, and when discovered in its infant and commencing state, is easily to be kept down and prevented from becoming destructive, if means of early application were at hand. We often hear of the alarm of fire given by watchmen long before the arrival of engines on the spot, and, if they were provided with a fire cart, the alarm of the watch and application of means of extinction would be simultaneous.

The cart contains six engines, each charged with the impregnated solution of an ingredient best adapted to extinguish fire. When the first engine has expended its store of antiphlogistic fluid, a supply of others in succession may keep up a constant discharge until regular engines and plenty of assistance arrive, should the fire not be entirely subdued by these first efforts.

When a small quantity of simple water is cast on materials in a state of violent combustion it evaporates into steam from the heat, and the materials thus extinguished readily ignite again; the addition of incombustible ingredients consequently becomes necessary to make quality supply the place of quantity, and thus with the smallest portion prevent the fire rekindling.

To give the most extinguishing properties to common water has engaged the experimental attention of many in different countries,* and it has been rendered by them more effective to extinguish fire than forty times the same quantity.

* 1734. M. Fuchs, a German physician, by throwing balls into the fire, containing certain preparations, which burst with violence, instantly quenched the fire.

1761. Zachary Grey used the same process, in which were alum, sal ammoniac, and other saline matters, with water.

In the same year Dr. Godfrey, in a public exhibition in a house erected for that purpose near Mary-le-bone, applied the like ingredients with great success, by the action of confined gunpowder only, which, exploding, dispersed the solution on the materials in combustion, and effectively extinguished the same.

1792. M. Von Ahen, at Stockholm, made numerous public experiments to show the effects of several combined ingredients to render materials entirely incombustible; he is stated to have subdued an artificial fire by two men and forty measures of preparation, that would have required twenty men and fifteen hundred of the same measures of simple water.

In the same year, M. Nil Mosheim made many public exhibitions to confirm that combustible materials might be made perfectly incombustible; as also did Mr. W. Knox, of Gottenburg.

tity of common water (a circumstance not speculative, but conformed by trial made upon buildings erected for that purpose); but the simple ingredient of pearl-ash dissolved in water when applied on burning substances, forming an incrustation over the surface extinguished, and thereby preventing the access, has in my estimation a decided preference; it has likewise the superior recommendation of the readiness with which any person may imbue the water with it, while the compounds cannot be had but at considerable cost, nor be prepared without labor and nice accuracy in their respective proportions. Thus at the moderate ratio of twenty times increasing the quality, the cart would convey an extinguishing fluid equal to one tun and a half of common water.

Specification in reference to the Apparatus belonging to the Fire Cart.—Each machine is a strong copper vessel, of a cylindrical form, two feet in length and eight inches in diameter, capable of containing four gallons; a tube of the same metal, of one-fourth of an inch in diameter, curved so that its end is carried to the side of the vessel, with a stop-cock and jet-pipe, the vent of which is one-eighth of an inch in diameter at its top, reaches to within half an inch of the bottom, and is to be screwed so closely into the neck of the vessel as to preclude the possibility of the escape of the air.

Three gallons of water, holding in solution any ingredients* best adapted to extinguish fire, are to be put into the vessel, and then the room remaining for the fourth gallon to be filled with closely condensed air; to effect which, the jet-pipe is to be unscrewed, the condensing-syringe fixed in its place, and the air to be pumped in, to the utmost power of the strength of the vessel to contain it; the stop-cock is then to be closed, condensing-syringe taken off, and the jet-pipe replaced.

On turning back the stop-cock, the condensed air re-acts on the water, and casts it to a height proportioned to the degree of condensation.

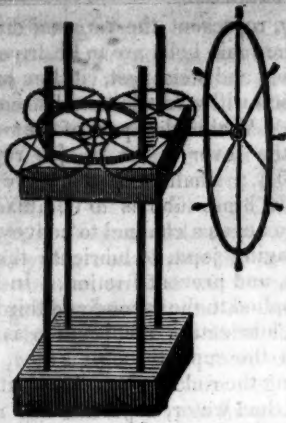
That the machine may be more easily carried, where access is difficult, it is put into a leathern case with a strap, and, slung over the shoulders of the bearer, is thus conveyed easily, and then directed with the utmost precision to the point requiring the water.

As directions for the effective arrangement of fire carts in populous places, the following plan I should propose: That at each watch-house, from the time of the watch setting, there should be in attendance a regular fireman instructed in the use and management of the apparatus; and that each parish should be provided with one or more fire carts, according to its extent or number of wards, and the vessels or engines composing the complement of the cart to be kept charged ready for being immediately applied. When watch-boxes or stations are at a considerable distance from the watch-house, some central watch-box should have a single engine lodged ready for application, to be brought on the alarm by the watchman, and delivered to the fireman, who repairs to the spot on the alarm of fire being given with as much expedition as possible. Should the fire have broke out near the depot of the fire cart, the fireman in attendance will take the cart with him, or an engine from it ready to apply; if otherwise, the watchmen will each bring an engine, which the fireman will expend, and by receiving from others their engines, a regularly-continued and well-directed stream will be kept up, which, from the early opposition to the fire, will no doubt check the flames, if not entirely subdue the fire; should the distance be considerable, the fireman, aided by a watchman, would convey the cart to a place on fire with as much dispatch as possible.

* Pearl-ash, dissolved in water, when applied on burning substances, forms an incrustation over the surface extinguished, and prevents that part from rekindling.

From the New-York Mechanics' Magazine.

MR. DUNHAM'S NEW PATENT SCREW PRESS.
—We have been much gratified by an inspection of this new invention, a correct engraving



of which we insert, and witnessing its operation in pressing paper, at the office of Messrs. Schols & Co., printers, in this city.

It consists of a cast iron bed, on which are erected four iron columns, with a screw on the end of each; the head or platen is attached to four cog wheels, which move it up and down on the columns—the whole being acted upon by a pinion wheel in the centre, thus moving the platen in a perfectly straight line without the least variation, which is a great improvement on the old presses, producing a reduction of friction, a gain of power, and a saving of machinery. The press in question can be constructed with one to ten thousand tons power or more, retaining all its advantages, and can be worked either by manual or horse power, or by machinery, and is peculiarly adapted to the expressing of oils, the pressing of paper, or any thing requiring a perfectly uniform, gradual, and equal motion.

We are informed that one man can, with this press, perform in the same given time an amount equal to that which requires four men with a bar and capstan press. The whole is composed of iron, and built in a substantial and workmanlike manner by Messrs. Fry & St. John, 87 Eldridge-street, requiring but one-fourth part the space occupied by common presses.

The press can be made of almost any size, and at about the same price, as the old fashioned ones, and which we are of opinion in a very short time it will entirely supersede.

Mr. Torrey's Patent Safety-Apparatus for preventing the Explosion of Steam Boilers.
Communicated by the Inventor for the Mechanics' Magazine and Register of Inventions and Improvements.

In consequence of the great destruction, both of lives and property, occasioned by the explosion of steam boilers, and the collapsing of their flues, it has been a subject of universal inquiry to find some method through the operation of which these disasters may be obviated; and that public excitement has become so excessive in the United States that the Executive of our General Government has issued a request to all scientific persons conversant with the subject, to send to the Secretary of the Treasury such information, or suggestions, as they may deem serviceable to explain the causes of these disasters, and the probable mode of preventing them. From all that can be gathered through the best of sources, and from engineers themselves, it is fully admitted that if the following requisites are strictly adhered to, there need be no apprehension of danger, either to life or property, from the operations of steam boilers:

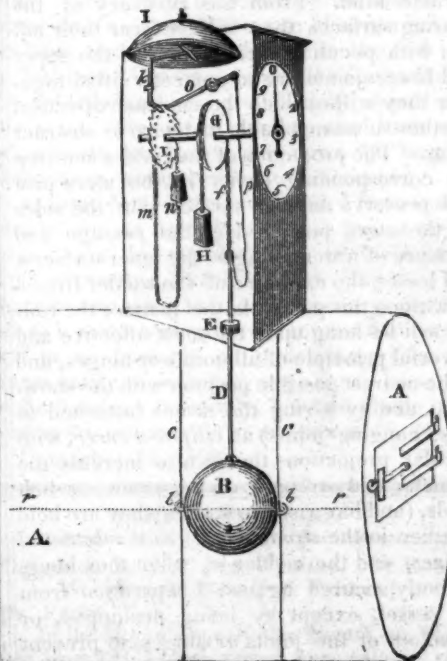
First, Ascertain by experiment the pressure of steam which a boiler and its flues can safely sustain;

Second, Graduate the safety-valve so as

always to be sufficiently within the *maximum* pressure of the boiler and its flues.

These precautions, faithfully attended to, will render steam as safe a power as any other now in use. The third and last precaution is, to keep the boiler at all times *sound*, when in use. Generally, from the diminutive circumference of the flues, when compared with that of the boiler, they can sustain more pressure from the steam acting on their outside, than the boiler within which they are placed can withstand inside; yet it is found that there have been more flues collapsed in boilers than there have been boilers exploded. Why should this be? The answer is, the metal of the flues must, from some cause, have sustained an injury. How can this injury accrue? The only reason apparent to the mind is, that the tops of the flues were left uncovered by the water; thereby permitting the heat within them to burn and weaken the metal of which they were composed—consequently, the want of a sufficiency of water in a boiler, whether with or without a flue, or flues, is the cause of a collapse. The same argument will apply to the boiler itself, provided the fire applied outside rises higher than the water within; therefore, agreeably to this reasoning, it must be inferred that if a boiler be proved strong enough to sustain a certain pressure, and the safety-valve is sufficiently loaded within that force, that the only cause why a boiler should explode, or a flue collapse, is from the want of a due quantity of water in the boiler. An engineer cannot tell the precise height of the water by the guage cocks, even should he be trying them all the while; for water will fly up when the cock is open, although above the water's level.

Viewing the importance of the foregoing considerations, and the darkness now surrounding the subject, the following apparatus has been made and applied successfully to a steam boiler in a steamboat:



REFERENCES.—A A, a cylindrical boiler, and *r r*, the water line inside of it; B, a globular float, intended to move perpendicularly—for which purpose it has two or more rings, *b b*, affixed to it, through which the rods *c c* pass, being made fast at their ends at the top and bottom of the boiler; D, a straight rod, or piston, the lower end of which is attached

to the float B, and the upper, after passing through the stuffing box, E, on the top of the boiler, is fastened to one end of the chain *f*, which passes over the wheel G—on the other end is hung the weight H; I, is an alarm bell, and *k*, the tongue or hammer which rings the alarm; L, a wheel which communicates with the hammer *k*, and over which the chain *m* is placed, to which the weight *n* is hung; O, a ketch communicating with the top of the rod D, by the cord *p*.

Of the fact that this apparatus will give the true height of the water in any boiler, and thereby give sure warning of impending danger to the lives and property of all near about, whether on board of the boat, or elsewhere, there is no doubt; but this is not the only advantage resulting from the application of it, which the following remarks will amply demonstrate.

In order to generate the *maximum* of steam from a definite quantity of fuel, there is one thing to be observed—which is, the principle regulating the power. *Ice* and *caloric* are the material of steam. *Ice* is the mere body acted on; *caloric* is the operator. This great mover must be dealt with in an economical manner, for the expense of water is but trifling, and fuel is high. To instance a component of steam: it forms at the bottom of the boiler in the shape of a bubble—now, in order to produce this bubble, a certain quantity of caloric is received, *more* than is requisite to raise the temperature to 112 degrees Fahrenheit, which super-abundant heat is termed *latent*. This bubble rises through the water, which, in temperature, is below the evaporable point, at the ordinary pressure of the atmosphere; and in its ascent, from the difference of its and its surrounding water's temperature, loses more or less of the super-abundant heat of which it is possessed. Should it have to pass too far through this element, it would lose all of this super-abundance of caloric, and become a part of the water itself; hence, the shorter distance a bubble has to ascend through the water, the less liable it is to lose its character of steam. The history of one bubble will answer for the whole that causes the operations of a steam engine. The question may be asked, where does this extra or latent caloric go, when the bubble liquidates? The atmosphere passing around the sides of the boiler will answer for the fact.

Granting every thing in readiness, and the height of the water in the boiler at the level *r*, it is evident that if the water falls the float must fall likewise, (always supposing the friction to be not too great for the weight or buoyancy of the float to overcome,) drawing the weight H up, and turning the wheel G, which moves the hand on the dial plate, which, by its figures, denotes the rise or fall of the float B, and the rods *c c* oblige it to move perpendicularly. The alarm can be given at any height of water for which it may be set, for the cord *p*, when tightened, loosens the ketch *o*, and the cord *p*, as it falls, stretches that cord; therefore, when the water has descended so far as to be considered dangerous, and the time of alarm is set at that point, the ketch *o* is sprung; the wheel L, then being at liberty to turn, is caused to revolve by the fall of the weight *n*, hung to the chain *m*, and this turning of the wheel L vibrates the tongue or hammer *k*, and the alarm is given. When the water rises, the float will necessarily raise with it, and the distance be denoted by the

figures 1, 2, 3, &c. on the dial plate. A spring, or rack and pinion, can be substituted for the weight H, should either be preferred.

[Of the utility of Mr. Torrey's invention there cannot exist a doubt in the mind of any reasonable person. Most of the accidents that have occurred in steamboats have been occasioned by the bursting of the boilers, and to find an effectual remedy for preventing a recurrence of similar disasters, has engaged the attention of practical and scientific men for a series of years. Mr. Torrey's plan, it appears to us, is an effectual one—it is so simple that it is almost incredible that it has hitherto escaped the notice of those whose avocations must bring the subject daily and hourly under their immediate notice. —The invention has been deemed of sufficient importance by several gentlemen to form a joint stock company for carrying into effectual operation the plan. The apparatus as above described has been placed by them on the *Delaware*, steamboat, plying between this city and Providence, and experiments have been made in the river, that leaves no doubt of the complete success of the undertaking. In a few days she will make her first trip, and we trust that in our next we shall be enabled to give a satisfactory account of its practical operation.—Ed. M. M.]

Taylor's Patent Improvements in the manner of hanging and effectually securing the Rudders of Vessels. [Communicated by the Inventor for the Mechanics' Magazine.]

These improvements in the manner of hanging and effectually securing the rudders of vessels render their rising and unshipping impracticable, and less liable to injury, and to be used with much less physical power on the wheel or tiller. Their superabundant weight is materially diminished, and rendered more effective for their easy and proper action. These improvements combine a powerful principle of union in their scientific simplicity of construction, and great utility, strength, and durability, in their practical operation: all which are of paramount importance for the proper government and safety of navigable vessels. These improvements are illustrated by reference to the respective sketches and figures, and the following is a description of their construction and application, viz:

Fig. 1.

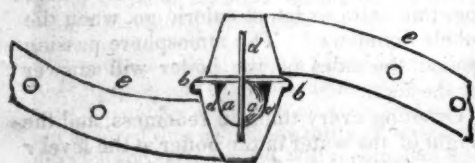
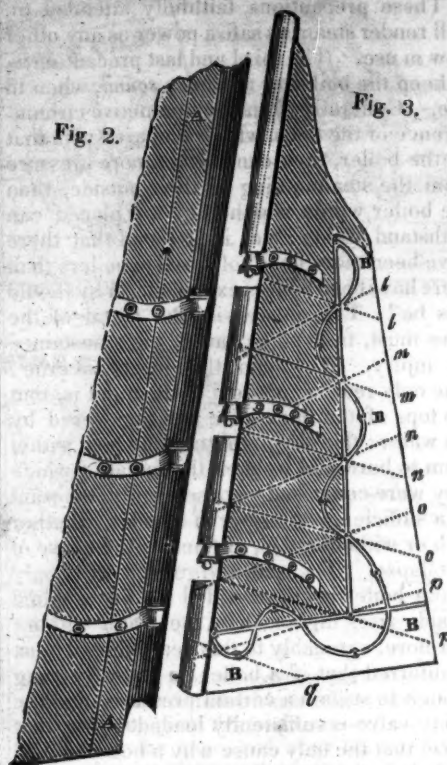


Fig. 1 is a section of a brass cup or joint, in which is formed a hemispherical socket, in working order. The following is a description of its parts, viz:—*a a*, a spherical bearing, in the centre of which is a groove for oil; *b b*, the recess, which contains a leather collar; *d d*, the hemispherical cavity, which contains the spherical bearing, (*a a*) and also the fluid necessary to lubricate its surfaces, and thereby prevent friction; *e*, shows the groove, formed in the spherical bearing, which permits the fluid to flow up, and lubricates its surfaces every time the ball is moved; *d*, shows the groove, formed in the upper joint for the reception of the lubricating fluid; *e e*, elliptical straps.

Fig. 2 is part of the stern post, upon which is formed a groove (to match the projection on the rudder), and upon this figure are the lower joints or cups, with their hemispherical sockets and connecting straps, firmly secured to

their stations. *A A*, represent strips of cop-



per, secured to these parts, to give extra strength to the hollow groove, near the angles.

Fig. 3 is the rudder, with its projection (to fit the groove in the sternpost), and attached to which are the upper joints with their spherical bearings; when these balls are let into their stations, (see fig. 4,) this projection will fill the groove in the sternpost, and a hinge will thus be formed for the rudder to play or turn upon, of the *strongest, easiest, and most durable* kind. From the accuracy of the bearing surfaces they will perform their action with peculiar facility, and as the upper and lower joints are so correctly fitted together they will exclude the entrance of water, or other substance liable to injure or obstruct them. The projection of the rudder entering the corresponding cavity in the stern post will preserve an even surface with the sides of the stern post, reduce the passage and pressure of water acting on the inner surfaces, and lessen the exposure of the rudder from a blow upon this part. In this manner the rudder will be hung upon the most effective and powerful principle of all joints or hinges, and in the nearest possible position with the sternpost; and by giving the straps (attached to these hanging joints) an *elliptical curve*, with circular projections thereon, to increase the diameter and strength of the screw, or bolt heads, (and likewise the straps,) they are held together in the *strongest and most substantial manner*, and the rudder is, when thus hung, perfectly secured against a separation from the vessel, except by being unshipped, or raised out of the joints or hinges, to prevent which an effectual remedy is applied. The circular projections on the straps are hollowed out, to admit suitable screw heads of the same diameter, by which means the joints can be more easily stationed and fitted with accuracy, in their central positions, than by inserting bolts, and striking them to form rivets, which has a tendency, by the vibration of blows, to throw the joints out of their proper position. The dotted lines marked *l, m,*

n, o, p, q, represent the *diagonal direction* in which the main bolts are to be driven, both in the rudder and stern post, (in lieu of horizontal,) which will give additional strength to the timbers. Within that part of the rudder post where the lever is let in, (as represented in Fig. 5,) a small circular groove is formed, and a brass tube is to be affixed in this cavity, to act as a channel to convey oil to the first hanging joint, to lubricate the bearing surfaces, and prevent friction. In lieu of oil being applied to the second and third hanging joints, a lubricating composition is to be inserted in the cups, through a tube, previous to hanging the rudder; this composition being heavier than water, a portion will remain in the cups after the rudder is shipped, and will diffuse itself to the bearing surfaces, and throw off friction. The introducing this lubricating composition in lieu of oil is in consequence of these hanging joints being constantly under water, and therefore precluding the insertion of oil to the cavities assigned for that fluid. The bearing surfaces of the hanging joints are not exposed to the violent and irregular action of the water, which would, in some degree, impede their motion, and create additional physical power to guide the helm; neither are they liable to the corrosive operations of rust, or other injurious causes, which now arise from the present mode of hanging ships' rudders.

On that part of the rudder marked *B B B*, is formed a projection, to receive a corresponding groove, formed in a wing of cork, to be attached and secured to it.

From the *elastic and buoyant* properties of cork, it will not only create the *first impetus*, or *spring*, to facilitate the action of the rudder, but will operate something like the tail of a fish, in governing the motion of its body,—will also reduce the superabundant weight of the rudder, and render it more easy and natural to perform its working operation. Another wing of cork is secured to the bottom part of the rudder, to act as already described, and to operate as a repulsive power, to preserve the rudder from injury, by the concussion of a blow that may strike this elastic substance.

The serpentine figure, with bars running through the centre of the rudder, is called the *guard*, which, secured on each side of the wings of cork and the rudder, gives *additional strength and security* to the rudder, and will preserve its hanging appendages from accident, as well as operate as a *repulsive power* to prevent injury.

Fig. 4.



Fig. 4 shows two sections of semi-circular brass clasps, to which are attached two of iron, to be affixed to the bottom part of the rudder post on deck. Within the semi-circular brass clasps are formed a groove to match the semi-circular iron clasps, on which is a projection, and when these figures are stationed and secured together, their surfaces will operate in mutual concert, something similar to a hinge, and act in conjunction with the rotatory motion of the rudder. It will also form a *rest, bearing, and guide*, for the upper part of the rudder. From which arrange-

ment the following benefits will result: First, it will materially *sustain the weight* of the rudder, and *relieve the joints or hinges of their burthen*. Second, it will effectually *prevent the rudder from rising and unshipping*. Third, it will form a *bearing* near the tiller, which communicates the motion, and keep it *steady*, and (in conjunction with the ease of the joints or hinges, and other important advantages) will *greatly lessen the power and labor* of its motion, so that the steersman's toil will be greatly reduced, and he can guide the helm to the respective points of the compass with great *facility and ease*, and thus steer the vessel *accurately* in its course. Two small circular cavities are formed in the two brass semi-circles, affixed to the rudder post, to admit oil, to lubricate the bearing surfaces, and prevent friction, this fluid will run into the grooves formed in the bearings of the brass and iron semi-circular clasps, and diffuse itself to the parts in contact.

Fig. 5.

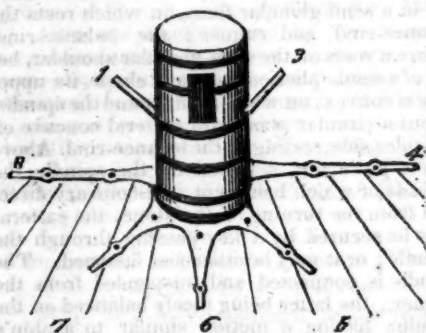


Fig. 5 is a perspective view of the parts complete, affixed to the rudder post on deck, which is secured by elliptical straps, three of which, marked 1, 2, 3, are to be a little elevated, and secured to the stern post and timbers adjoining. Those marked 4, 5, 6, 7, 8, to be secured by being let into the floor of the deck with screws. On the post is represented circular iron binders, and mortice for the lever.

Experiments in Canal Steam Navigation. By R. G. M. [From the London Mechanics' Magazine.]

MR. EDITOR,—It may be deemed very imprudent for an individual with small means to attempt propelling a canal boat by steam, especially when there are many persons in his neighborhood more competent to the undertaking, having more money and better conveniences for the purpose. I well knew, however, that though their means and appliances were ample, they had more lucrative and agreeable channels wherein to apply both. With this impression on my mind, and having no employment for a small steam engine which I had by me, I commenced the experiment which I beg now to relate.

Selecting an old heavy-sailing canal boat, I tried several kinds of paddles placed in various situations of the boat, repeatedly altered the machinery, and travelled several voyages with her myself, the last of which was about five miles in three hours on the Birmingham canal, with twenty tons long weight on board her, exclusive of the machinery. With this heavy-sailing old canal boat, an engine, not built for the purpose, and machinery put together in a country place, where no such workmen or tools can be had as are to be found in large manufacturing towns,—with these disadvantages I have per-

formed that voyage by steam alone, without the aid of any other power. By this dearly bought experience, I am in possession of the dimensions and capacity of every article necessary—the limits of the projection of the machinery and guards, above, below, and on the sides of the vessel, so as to clear locks, bridges, slopes, and other boats and lines, with the precise strength of the engine required to propel a boat at the utmost speed which the depth of canal will admit. I can, therefore, confidently state that canal boats can be propelled by steam to answer every purpose, except short voyages and frequent loading, up and down any locks, without injury to the canal banks, without injury to other craft, with the same manual labor, and with about five shillings in fuel for a hundred miles' voyage. The charge of steam navigation being injurious to the canal banks must have originated in error, or perhaps from prejudice, before the railroad system had been proved: for my own part, if I wanted to lessen the damage now done to the canal banks and other boats, I would propel them by steam instead of tracking by horses. In fact, any person acquainted with the business of a canal will acknowledge that a horse draws in an indirect line, while the steerer to keep his vessel straight, puts the helm to the opposite side, which causes a heavy surge, and this is much increased in windy weather, and with an increased speed still more; while a steamboat glides sweetly and majestically through the water, the paddles heaving in a direct line always ahead. With regard to speed, it must be in proportion to the shape of the boat, the quantity of lading on board, and the depth of water; and, generally speaking, the depth of canals is not such as to admit of a very great rate of speed, because, if a power sufficient were applied to a boat heavily laden, she would soon drag on the bottom. But it must be remembered, that if a horse draws a boat at the rate of seven miles an hour, that boat and horse, at the end of an hundred miles voyage, would be more than 20 miles behind one propelled by steam at the same rate, since passing the lines of other boats, and thus letting down the boat's momentum, would cause this difference.

At some cost, and much labor, I have enabled myself to state these facts, but at present I must lay my boat and engine aside, from necessity, however, not choice. If there be any thing in my experience acceptable to a more competent adventurer than myself in so laudable an undertaking (for it wants only competence), so as not to leave it in the hands of monopoly, I would gladly afford every information in my power.

December 13, 1832.

AGRICULTURE, &c.

Ploughing in Hot Dry Weather. By R. M. W. [For the New-York Farmer.]

MR. FLEET,

In the fifth volume of the New-York Farmer, page 321, I have noticed some editorial remarks concerning ploughing and hoeing in the heat of the day. You will observe that the object is not to condense the moisture of the atmosphere. This moisture, in order to afford food to plants, I conceive must be dissolved in caloric. The moment it is condensed it affords little or no support to plants; the circulation of moisture in plants is said to be very similar to that of the arterial and venous circulation in animals, that is, the moisture received by the capillary vessels of the leaves reaches the roots, and little of this mois-

ture ever reaches the earth, but is taken up before it reaches there by the leaves of plants. The moment this is condensed it can no longer enter by the capillary vessels into the vegetable circulation. To plough then in the afternoon, or to place cold bodies in the neighborhood of plants, would be rather injurious than beneficial. Such are my ideas on this subject, and I remain yours, &c.

R. M. W.

February 11th, 1833.

Loudon's London Gardener's Magazine.

The December number of this periodical has just come to hand, having been several months in the Custom-House, packed with Messrs. Thorburn's seeds, which were delayed until the 4th of March, for the benefit of the reduction of duties.

This number, although interesting, contains but few articles which are of sufficient practical importance to transfer to our columns. We shall, therefore, only give the substance of a few paragraphs.

THE CHOLERA.—A pamphlet of 32 pages is noticed, containing letters from thirty Physicians in answer to a committee of the Market-Gardener's Society. The conclusion drawn from the opinion of these medical gentlemen is, "that the impression of fear in the public mind with regard to vegetable diet may be entirely removed, and confidence again restored; as the general use of vegetables, as hitherto, is not only judicious, but highly beneficial and valuable."

HAWKS TO FRIGHTEN BIRDS.—A Hawk confined in a cage and placed in the garden or field is found to be of more service to frighten away birds than other scare-crows, including a sleepy boy.

TOBACCO LIQUID.—It is common to burn coarse tobacco leaves to destroy insects on plants. If the leaves are first soaked in water, and then burned, they answer equally well, and in addition, furnish the liquid which is used for the same purpose.

PEARS GRAFTED ON THORN.—planted in a good soil, come early into bearing; the fruit is larger than on the common stock, and the quality equally good, at least while the trees continue in a healthy vigorous state.

GOLDEN LEAF TOBACCO.—Mr. Minor: From some pamphlets and papers on Agriculture, presented me by Judge Buel, of Albany, and some other sources, I find your paper, entitled the "New-York Farmer," highly spoken of as valuable to farmers. I therefore take the liberty to enclose you a paper of genuine Golden Leaf Tobacco Seed, which I procured through our Representative to Congress, William G. Angel, Esq. I procured it on the recommendation of the late Governor Clinton to our Legislature, after sending to the south part of Ohio, and two or three times to Maryland, the only two states Gov. C. mentioned in his Message where it might be had. I have (as Judge Buel thinks) been the only person that obtained it in the Northern States. I have raised it two seasons; it has four times the weight on each plant of our old kind here, and is worth much more in market, even three times, as I am informed by Messrs. Chapman & Sergeant, Murdock, and other tobaccoists in Albany, and so I presume they will tell you in New-York. My son, Hiram Matteson, advertised the seed last year, and they sent for it from all parts of the Northern States, Ohio, Michigan, and Upper Canada; but the very extraordinary backward season did not permit much, if any, of the seed to get ripe. I therefore sent to Maryland for a fresh supply—its culture is considered of the greatest importance and value of any crop we can raise.

I have this seed for sale at one dollar per spoonful. Letters, post paid, directed to Matteson's Mills Post Office, Exeter, Otsego county, N. Y., will be attended to, and directions sent for culture. It must be sown in April.

Yours respectfully, Z. MATTHESON.
Exeter, Otsego co., N. Y., March, 1833.

Fig. 1.

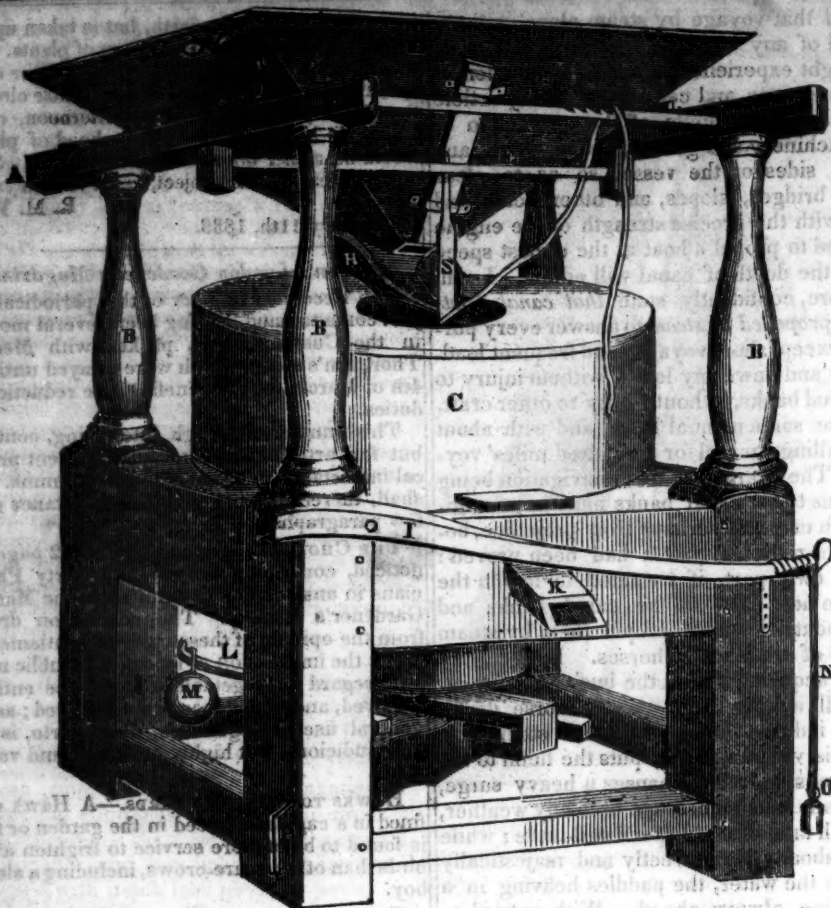


Fig. 2.



Fig. 3.



Fig. 4.



Mr. Hotchkiss' Patent Grist Mill. Communicated by the Inventor, for the *Mechanics' Magazine and Register of Inventions and Improvements*.

WINDSOR, Broome county, New-York,
March 7, 1833.

SIR,—I herewith send you a drawing and description of my improved Grist Mill.

REFERENCES.—Fig. 1. A, the ladder, or top of the hopper frame; B, hunk posts; C, hoop enclosing the stone; D, hopper; E, cross-bar, that receives the top of the damsel; F, do. over which the strap crosses that supports the shoe; G, the pressure lever, that gives weight or gravity to the runner; H, the shoe; I, lighter staff; K, meal spout; L, pressure lever; M, weight on the pressure lever; N, strap on the lighter staff; O, weight on said strap; P, rod, or sword

piece, that connects the lighter staff and bridge-tree; S, the damsel.

Fig. 2. The top represents the screw part of the spindle; 2, balance rind and wings of flights; 3, driver, and do. do. (see also Fig. 3); 4, collar to spindle; 5, pulley on lower end of spindle; 6, screws, or staples, to hold binding irons; 7, inside of oil-pot; 8, binding irons, two of which and foot of spindle form the lock joint; 9, tram block, which is fast to the bridge-tree.

Fig. 3. Driver, and balance rind and wings of flights (see also Fig. 2.)

Fig. 4. The propelling wheel.

The principal objects to be effected by my improvement are to perform fast grinding with small stones, without heating the flour; thereby lessening the expense in erecting the mill, and requiring less power to drive it.

Also to improve mills now in use, by placing

the hereinafter described cylinder and flights in the eye of the runner, to keep the stones cool and to make the flour better.

The frame on which the stones, &c. are placed, is made by framing together four posts, one at each corner, and eight girts, four of which to be of sufficient width to receive and support the beams bearing the stones and the flooring around the bed stone. One of the lower girts is of sufficient size to receive an end of the bridge-tree inserted in a mortise in the same; the other end resting on the centre of the brake moving on a joint inside of the opposite girt.

On the middle of the bridge-tree rests a key or tram block, in which is secured the oil-pot or box. In the centre of the oil-box turns the foot or lower point of the spindle. The spindle is made of iron and steel, with a flange or circular projection near the lower end. An iron lock-joint made in two parts encircles the spindle immediately above the flange or projection, and is screwed to the tram block, which secures the foot or point of the spindle in the oil-box and prevents its escaping or bounding out therefrom. The spindle, as high as the collar, and square part on which is placed the driver, is made in the usual manner. The shoulders of the spindle above the driver are to be rounded off in a semi-globular form, on which rests the balance-rind and runner; the balance-rind, where it rests on the semi-globular shoulder, being of a semi-spherical concave shape, its upper side is convex; on which, and around the spindle, is put a circular washer or eattal concave on its under side, resting on the balance-rind. Above this is put a nut, screwed on the spindle, the threads of which being cut in a contrary direction from the turning of the stone, the eattal may be secured by a key passing through the spindle; or it may be otherwise fastened. The spindle is connected and suspended from the runner; the latter being nicely balanced on the spindle, having a motion similar to a ship's compass, and, whilst running, constantly forming itself to the bed-stone in the nicest manner. The damsel is screwed, or otherwise fastened, to the upper end of the spindle.

A pulley whirl, drum or cog-wheel, is placed on the spindle to drive the same. A weight is added to the spindle in order to give greater power or gravity to the runner when required, which may, therefore, be of smaller size, and will move with greater velocity; thereby lessening the expense and power required in constructing and driving the mill.

The driver and balance-rind are curved or twisted in such a manner as to answer the purpose of flights or wings, which, during the operation of the mill, carry round and force the air which is in the eye of the runner between it and the bed-stone along deep channels cut in the runner—or pipes inserted to distribute the air—and out of the circumference thereof: also through grooves cut on the periphery of a hollow cylinder inserted in the eye of the runner, creating a current of air through these grooves, and a draft or suction through the eye, causing a more free, easy, and quick admission of the grain between the stones.

Mills that grind fast are liable to heat the flour, and consequently injure it,—but the currents of air, created as before described, and driven between the stones, prevent this from taking place.

To the brake may be attached a screw or lighter staff in the usual way, to raise or sink the runner at pleasure. Also, near one end of the brake, and on it are placed weights and springs, or a fulcrum supporting a lever, attached to one of the corner posts of the frame by a bolt passing through one of its ends, and having a weight suspended near the other end, in the manner of a steelyard, by which the gravity or power of the runner may be increased or diminished at pleasure, so that an equilibrium is formed between the power required and power applied.

The hoop, hopper-frame, hopper, and shoe, are made in the usual manner.

What I claim as my invention, and for which

I obtained letters patent, is increasing the gravity of the runner by means of weight attached to the spindle, or by means of the flange near the bottom of the spindle and the lock-joint fastened to the tram-block on the bridge-tree, with the lever and weight acting on the same; the spindle passing through the balance-rind, secured to and suspended from the runner; the inserting wings or flights in the eye; the shape of the driver and balance-rind causing currents of air to pass between the stones in pipes or otherwise, and through grooves on the circumference of a hollow cylinder placed within the eye of the runner, carrying off the dirt and keeping the stones from heating, likewise causing a draft through the eye, which allows the grain to pass more freely to the grinding stones.

The mills are portable, and can be attached to any machinery, horse, steam, or water, with about two horse power, and are constructed on such a principle as to perform fast grinding with small stones, without heating the flour, and thereby greatly lessening the expense in erecting mills, and requiring much less power to grind them. The improvement can also be applied to mills now in use of the common construction.

I am, Sir, yours, &c.

GIDEON HOTCHKISS.

[We are much obliged by Mr. Hotchkiss' communication: it is from such sources that we look with confidence for much valuable matter to enrich our columns. Mr. Hotchkiss possesses certificates of the utility of his invention from upwards of seventy practical men, including many millers and millwrights, who have witnessed the operation.—Ed. M. M.]

[From the New-York Farmer.]

Suggestions relative to Farmers' Work for April. By the EDITOR.

This is a very important month with the farmer,—all vegetation is bursting into life. Every agent in nature is brought into requisition. All animated nature begins to feel the vivifying influence of the genial sun. Imitating the activity of nature, farmers should be up and doing.

HORSES.—These should be kept in fine order, that they may be able to retain their flesh and strength throughout the laboring months of April and May. Breeding mares should not only be not worked hard, but care taken that they are not overheated, jerked about, kicked or frightened. They should not suddenly change from hard labor to ease, but should gradually have their work lightened.

COWS.—At this season of the year it is not uncommon to see cows wretchedly poor, particularly after calving. They are so weak and feeble, from light coarse feeding before calving, which is so trying to their nature, that they have scarcely energies sufficient to regain their wonted appetite and strength.

FENCES.—These should be righted and repaired immediately after the frost is out of the ground. It is very difficult to keep board fence from leaning, or blowing down, particularly in moist ground. This we should suppose might be remedied by having the posts much larger at the bottom, tapering towards the top. In this way there may be great economy in the posts. One as now used will make two that will be more than twice as serviceable. Posts do not decay at the top, but near the ground. Let the fence be as light as possible towards the top, in proportion to the bottom.

GRASS LANDS.—If a supply of fine manure is on hand, scarify your grass lands, and then give them a top dressing with manure. This will greatly increase the quantity

of hay. If you have reason to think moles, ants, and the frost, have rendered ground uneven, the grass will be benefitted by rolling.

ARABLE LANDS.—Farmers should study and apply their means to obtain the greatest quantity and number of crops from the least ground, rather than to break up and plant as many acres as possible.

MANUFACTORIAL PLANTS.—Farmers should endeavor to become acquainted with the plants that are used in manufactories, with a view of introducing more or less of them in their routine of culture. Woad, madder, flax, hemp, mustard, oil plants, rape, poppy, rhubarb, and numerous others, are used in the arts, domestic economy, and medicine.

MULBERRY.—Let no farmer, who wishes to enhance the value of his own, provide for his children, and benefit his country, neglect to sow a sixpence worth of white mulberry seed, and buy one or more plants of the Chinese mulberry, *morus multicaulis*. By thus doing, in the course of two or three years he will have several thousand plants. If the multicaulis is increased, by laying it, buds sufficient to inoculate the others will be obtained.

SALT FOR SHEEP.—There have been instances when clear undissolved salt has been considered destructive to sheep. It appears to us unnatural to give any animal raw salt. If their food is rendered more palatable by a moderate portion of salt, it would seem as though it would be beneficial in all instances.

FOWLS.—At this season of the year fowls get but comparatively little food—neither insects, nor grain from the barn, and the grass is but short, without seeds; consequently, they should continue to be fed.

LOCUST.—By an expense of a few shillings, any farmer can procure seed sufficient for many thousands of this useful tree. A writer in a Kentucky paper says he sows the seeds in hills, and cultivates them as he does corn—puts six or eight seeds in a hill. An expeditious way of obtaining a plantation of locust is to set out a number of young trees in various parts of the fields, cultivate the ground as usual, and in the spring, after the trees have extended their roots, cut them down. Numerous young ones will sprout up.

PRUNING.—Forest and fruit trees that were not pruned last month should undergo the operation. Prune lightly, rather than severely. April is thought by many to be the best month for pruning, as the wounds heal over sooner.

Suggestions relative to Florists' Work for April.

By the EDITOR.

Green House.

RE-POTTING.—Plants that were not re-potted last month, should be put into fresh suitable soils. Care should be observed to disturb as little as possible the fibrous roots.

LIGHT AND SUN.—Health and luxuriance of growth cannot be expected in the absence of very considerable light and heat, as well as pure air. The last is required to habituate them to the exposure to open air.

WATERING.—As the warmth of the weather increases, the watering must be gradually increased. Those of soft shrubby nature, and growing freely, require more water at a time than those of a harder texture. Plants generally suffer more from superabundance of water than from dryness. The beauty of the foliage and the general health of the

plants are promoted by being syringed two or three times a week in dry weather. The flowers, however, are rather injured by the water.

HEAT.—Should the sun injure the plants, particularly those near the glass, let the glass be lightly whitewashed.

HERBACEOUS PLANTS AND BULBOUS ROOTS.—Divide and re-pot those that were omitted last month. They should be moderately watered two or three times a day. Cape bulbs, that begin to lose their foliage, require a decrease of water. After the foliage is off, dry the bulbs, and pack them in dry moss. Pots containing Dutch roots that have flowered should be laid on their sides, to ripen the bulbs; or plant the contents of the pot in a bed in the garden.

FLOWERING PLANTS require but comparatively little sun while in flower. Flowering stocks for seed should be set out into beds.

Flower Garden.

ANNUALS.—The seeds of these generally may be sown from the middle of April to the latter part of May.

BIENNIALS AND PERENNIALS.—Biennials from the green house should now be transplanted, and the seeds sown.

PERENNIALS.—These should be divided and replanted, carefully watered and sheltered. Among the flowering plants which should be selected are the numerous varieties of the Chinese monthly roses, which are of all hues, the climbing roses, such as the splendid Champney, the Noisette, Musk Scented, Lady Banks', Greville, and numerous others, the various climbing plants.

DECIDUOUS SHRUBS.—In transplanting, great care should be taken to preserve as many fibrous roots as possible, and to keep them from becoming dry. They should be planted before the foliage puts forth, that they receive no check.

EVERGREENS.—During this month these favorite plants should be taken up and set out with as little delay as possible. After the roots are partly covered, water should be poured on in successive times. The appearance of the ground around the plant is not improved by pouring water on the last or top layer of earth.

THE WALKS.—Grass walks should be often mowed and swept, and gravel paths require to be rolled often in the spring, particularly after rain.

BOX EDGINGS.—This plant should be clipped about the middle of this month. Box edgings should seldom be allowed to grow but a few inches in height, generally only three or four.

Rooms.

AIR AND WATER.—If plants are judiciously supplied with these, as well as with light and sun, they will do well in windows or rooms. In mild days they should be taken out-doors in the shade, and syringed. Some ladies will make their plants in their rooms surpass in appearance those of many green houses. When first taken from a green house, they should not be exposed to much hot sun, but should have light to brighten the colors of the flowers.

ERGOT IN RYE.—Spurred rye is generally considered poisonous. It is often supposed to be the cause of epidemical diseases. A writer in the Genesee Farmer relates an instance of a person frequently eating a large tablespoonful of ergot with impunity.

SUMMARY.

GEN. SCOTT, who left Charleston in the Natchez sloop of war on the 29th ult, arrived in Washington on Saturday last. The ship was in Hampton Roads.

The Editors of the Norfolk Beacon were present on the 4th instant, with a few Cucumbers and Strawberries, from the garden of the United States Navy Hospital.

Of the handsome range of houses in Lafayette place, with their magnificent marble colonnade, which were to be sold to-day at auction, one only, No. 8, was offered. It sold for \$26,000. Mr. Geer, the owner of the houses, then stopped the sale.

RICH ARRIVALS.—On Saturday last, there arrived at this port no less than four valuable cargoes of silks, teas, &c. from China, (a greater number than we recollect to have placed on record in one day,) viz, the ships Superior, Oneida, Florida, and Mary—also the ship Asia from Batavia, with coffee. The cargoes may be fairly estimated at 300,000 dollars each—making in the aggregate nearly two millions.—[Gazette.]

Important Decision.—Vice Chancellor McCoun yesterday morning gave his decision in the case of William Scott and others, stockholders of the late National Insurance Company, vs. Frederick Depeyster and others, President and Directors of the same. The suit was brought to recover one hundred and seventy-nine thousand dollars, which had been fraudulently abstracted from the funds of the company by Oliver G. Kane, Secretary. The general charges in the bill were, that the funds of the company had been illegally invested, and that there had been gross negligence to the affairs of the company on the part of the defendants, in consequence of which all these losses had occurred. The judgment of the Court was, that on none of the charges were the defendants to be made liable. The bill was therefore dismissed with costs.—[Journal of Commerce.]

There is, we think, both weight and fairness in the annexed observations of the New Brunswick Freonian, on the recent practice here with some of our contemporaries, of reporting arrivals.

The New York papers have commenced the publication of the names of persons daily arriving at the principal hotels in that city. We doubt both the policy and propriety of this. One does not, for instance, always choose to have it proclaimed where he puts up, because the price may be deemed too low for his dignity, or too high for his pocket. Neither is it at all times, quite convenient to every gentleman visiting the city, to receive the attentions which a notice of his presence and "local habitation" might draw upon him. But there is a real and substantial objection to this mode of advertising persons, on the ground that it is an unauthorized and frequently an unwelcome intrusion upon their privacy, an abridgement of unquestionable right, and a sort of espionage which may, in some cases, materially interfere with both social and business relations. It might also, by construction, be deemed a violation of the rights of hospitality.

N. B. We perceive that our goodly city has credit for sundry crooked names never before heard of here. This is a piece of waggery which will frequently be practised, and will show that the design of the advertisers will not be accomplished.

Narrow Escape from a Bear.—A young man, in passing through the woods near Bangor, Me., a short time since, found himself within a few feet of a ravenous bear. He sprang to the nearest pine and climbed up, the bear clambering after him. Making good use of his feet he dashed his antagonist to the ground. The bear returned and was again repulsed, carrying with him one of our hero's boots. Bruin ascended a third time and with more caution. The young man, hoping to escape, ascended the tree about fifty feet, and as the bear approached him attempted to shake him off, but in vain, as his foot was held by the paws of the infuriated animal, who had lost his hold of the tree and hung suspended by the poor man's leg. The young man's strength becoming exhausted he let go his hold on the tree, and down they went with a tremendous concussion to the ground. Our hero struck on the bear and rebounded eight or ten feet distant. The affrighted pair sat eyeing each other for sometime, when the bear, who was the more severely bruised of the two, showing no signs of fight, the young man rose and fled, leaving his hat and the boot behind him, his friend of the shaggy coat casting at him an expressive look, accompanied by a growl and a shake of the head.

Naval.—The U. S. schooner Grampus, Lt. Com. Smoot, which sailed from Hampton Roads 22d inst. for the West Indies, via Charleston, was spoken 24th inst. in lat. 54, long. 77, by schooner Mercator, reported under our marine head.—[Norfolk Beacon]

Gold.—A very rich vein of gold has been recently discovered on the land of Mr. Smith, in Spottsylvania, Va. It is said to run horizontally for the distance of a quarter of a mile, and that a shaft, which has been sunk fifty feet, has not reached the bottom. The Fredericksburg Arena says, in reference to the productiveness of this mine, that about 50,000 bushels of ore have been raised, of which a small portion is said to yield 50 dollars per bushel; and that the least valuable part of it is estimated to be worth five dollars per bushel.

Death of Professor Ashmun.—The Law School at Cambridge and the legal profession at large, have met with a heavy loss in the death of John Hooker Ashmun, Esq. Royal Professor of Law in Harvard University, who died suddenly on Monday morning. He had for some time suffered from a pulmonary disorder, but had within a few days appeared in our Court, and was expected by his physician to have been able to go out yesterday.

He had the reputation of profound learning, and high hopes were entertained of his approaching distinction. But death has laid low these expectations.—[Boston Mer. Journal.]

The following gentlemen have been elected Directors of the Office of the Bank of the United States, in Washington City, for the ensuing year, viz:—Samuel H. Smith, Thomas Swann, Benj. O. Taylor, Wm. Prout, Walter Smith, Robert H. Miller, Wm. S. Nicholls, Thomas W. Fair, Wm. C. Gardiner, William Laird, Darius Clagett. And at a meeting of the Board on the 2d instant, Samuel H. Smith was unanimously re-elected President.

Population of New Bedford.—The present population of this town, as appears by a statement submitted at the annual town meeting on Saturday, by the School District Committee, amounts to 9,260; showing an increase since the census of 1830, of 1,768.—By the census of 1820, the entire population was only 3,947.—[New Bedford Mercury.]

It has been noticed as a remarkable coincidence, that the number of signers to the Declaration of Independence was fifty-six, and that the death of the venerable Carroll, and last of the signers, took place just fifty-six years after the signing of that instrument.

Military.—We learn from an officer of the Army, that an order has issued from the head quarters of the Western Department of the U. S. Army, for the temporary occupancy of Fort Smith, by a company of the 7th regiment of Infantry. One of the objects of this measure, we understand, is to prevent the illegal introduction of spirituous liquors among the Indians.—[Little Rock, Arkansas Gaz.]

Protests.—The Supreme Court have decided at their last special term, that by the Revised Statutes the fee for protesting a note or draft is 50 cents, and not \$1, 50, as charged by the notaries.

The Lynchburg Virginian says, the Legislature of Virginia "has actually appropriated \$2500 to remunerate Mr. Leigh for travelling to and from Charleston, and staying there six or eight weeks."

ST. LOUIS, MARCH 23.—We deeply regret the necessity of publishing the following extract from a letter received by express from the Rocky Mountains.

Missouri Establishment, Feb. 14th, 1833.

"Joseph Papin came in with the letters, and states that he had been sent out by Mr. Vanderburgh to kill Buffalo for the camp, of sixty persons; in a short time he returned, saying he had seen cows, just slaughtered, and was sure that Indians were near. Mr. V. was incredulous, but called on a few men to follow him, and said that he would satisfy himself. Remains of meat roasting, and fire still burning near a cow, a powder horn and fire steel lying by the fire convinced him that the Indians were then very near. He resolved to follow up their trail: he pursued it across the plain, until he reached some uneven ground, where it was lost, and suddenly a volley was discharged from an unseen enemy: a rush of near one hundred Indians quickly followed. Mr. V.'s horse was killed at the first discharge; he disengaged himself—levelled his rifle—killed one man, and, while raising his pistol at another, fell dead from a ball received in his back.

Alexis Pillon was also killed. Joseph Papin and four others escaped and found refuge in the Camp. The next day the party searched for the bodies, but could find no vestige of poor Mr. V. Mr. Pillon was

buried by us, and the party then crossed the mountain to join Mr. Dripps and his party.

The Black Feet showed the rifle and pistol of Mr. V. to Mr. Bird, and boasted of having killed a white chief, and one of his men.

"Mr. Bird is an interpreter, and happened to be with the Indians at the time."

St. Louis, March 23.—Steamboat Disaster.—The steamboat Enterprize, Capt. Beatty, bound with a full cargo, from this port to Galena, and Prairie Des Chiens, last Tuesday at 12 o'clock noon, struck a snag about three miles above the mouth of the Illinois river, and sunk immediately. The cargo will probably be saved, except such articles as are perishable by water.

Loss of the ship Glide.—By the arrival at this port of the brig Henry Tallman, Capt. Lemont, from Matamoras, we learn that on the 7th inst. he spoke a schooner bound from New Orleans to S. W. Pass, Vermillion Bay, which reported, that the new ship Glide, of Portland bound from Boston to New Orleans, with a small cargo of hay, &c. was cast away on the Tambelier Island, on the 5th. All the information which Capt. Lemont could gather, was, that the crew were all saved—the ship had 13 feet water in her hold—supposed to be entirely lost.—[Franklin Republican, March 13.]

NEW ORLEANS, MARCH 19.—Shipwreck.—The new ship Knight, Capt. Knight, from Portland, arrived and anchored at the S. W. Pass about ten days ago—Being in that situation, she struck an old anchor, buried in the sand. The wind coming to blow fresh, and being unable to get her anchor on board, the Captain was compelled to cut her cable away. She was driven out to sea, and was soon found to be leaking at the rate of 50 strokes of the pump a minute.—The crew being exhausted by continual exertion to keep the vessel from sinking; the captain drove her on the Caillou Island, with eight feet of water in the hold. She had 200 tons of stone ballast and 160 bales of hay on board; was insured in Boston, we understand, for the sum of \$14,000. The amount of property saved, is rated at \$3000, in furniture, rigging, and spars. The Captain and crew came down in the Cora from Lafourche.

Steamboat Disaster.—We learn by the steamboat Arkansaw, that the steamboat Superior, on her way down recently burst one of her boilers, between Point Chicot and Washington, by which accident five persons were killed, and seven or eight severely scalded. Among the former was Mr. Carnes, the head engineer. The others were firemen and deck hands. This is the second accident of the kind that has happened on board the same boat within a few months.—[Arkansaw Gaz.]

FOREIGN INTELLIGENCE.

LATER FROM FRANCE.—By the packet ship Louisa, from Havre, we have Paris papers to the 26th February. Our latest previous dates direct were of 18th February. The Gazette de France of 25th contains this paragraph:

"Letters by writers of credit received to-day from Madrid, announce positively that the Portuguese Government having satisfactorily explained the shots fired at a French vessel entering the Tagus, the matter may be considered as at rest. There was only left to be settled the affair of the *Alcyon*, sunk at the mouth of the Douro. It is understood at Madrid that this too would soon be arranged, and then no pretext be left for any attack against the Government of Don Miguel. The mission of Sir Stratford Canning has failed completely. The Spanish Government refused to lend itself to the views of the British Cabinet, and M. Zea, whose credit Lord Palmerston was desirous of overthrowing, seems destined long to remain at the head of the Spanish Cabinet."

The anniversary of the birth day of Washington (says a Paris paper of the 23d) was celebrated by a splendid fete, given by Mr. and Mrs. Welles. The prettiest women and most distinguished personages in Paris were of the party.

The Charles Carroll packet, which left here on the 1st of Feb., went out in 19 days.

The Journal of Commerce has received dates later than ours. From its Extra we take the following extracts. We presume the acknowledgment of her private marriage, made by "the prisoner of Blaye," about whom so much romantic chivalry has been expressed in France, and by the *diplomatic corps*, will

do more to crush the Carlists in France, than all the acts of the Government of Louis Philippe. It covers her partisans with ridicule, and that is mortal everywhere, but more speedily so in France than elsewhere.

By the article under the Vienna head from the *Havre Journal* of 2d March, it seems that the victorious Ibrahim refused at last to agree even to an armistice with the Porte, and that he was marching on Constantinople. Russia had been called on by the Grand Seigneur for aid. Perhaps, after all, the spark of war which seems extinguished in the west of Europe, is to be rekindled in the East.

A later paper—the *Gazette de France*, of the 2d March, this moment received—states that Ibrahim had again halted by order of his father.

The affairs of Don Pedro are spoken of as more promising, disease and bad supplies having much impaired the efficiency of the Miguelite army.

M. de Chateaubriand had been acquitted in Paris, and was borne away from the Court in a sort of triumph.

[From the *New-York American* of Tuesday.]

LATEST FROM EUROPE.—There is a fleet of packets and other foreign ships announced as below. The *Mary Howland*, from Liverpool, of 8th ult. is the latest as yet.

The King of Holland, according to Brussels accounts of the 5th, had refused to comply with the summary demand of France and England as stated in this paper of — last, and declared himself ready to meet all the consequences of such refusal. We see not how, under the circumstances, the march of a French army and the sailing of a British fleet against Holland is to be avoided—for these were the alternatives stated by Talleyrand and Lord Palmerston, in case of the non compliance of the King of Holland by the 15th March.

The publicity given to the declaration of the Duchess of Berri, and its deposition in the archives of France, is spoken of with unbounded severity by the liberal as well as loyal papers.

The *National* says "There is not in Paris a family of the working class, however poor, who would not rather forego its last morsel of bread, than brand the forehead of one of its members with the ignoble legend with which the Chancery of Louis Philippe proudly enriches its archives, after having soiled with it the walls of the Castle of Blaye. In our humble plebeian families, they know not how to turn over to public malignity the weaknesses of their own blood, in order to derive a gross benefit therefrom. This Protest of a wholly particular nature is only fit for upstart royalty."

In the *Messenger des Chambres* of 2d March, we find the following article under the head of Falmouth (England), Feb. 22:

"Among the passengers in the Lisbon packet, bound to Oporto, is M. Cabral, an ex-magistrate and deputy from the Azores to the Portuguese Cortes. He is said to be the bearer of arrangements made with some bankers of Paris for a loan of fifty million francs, (ten million dollars,) negotiated by Gen. Saldenha for Donna Maria. If this be true, we should soon hope for the solution of the Portuguese question; for the party that has most money will assuredly beat the other."

The *London Globe* of 27th February quoted in the *Estafette du Havre*, of 2d March, says:

"Letters this morning from Lisbon agree in representing the army of Don Miguel to be in such a state of sickness and destitution, that it was thought the siege of Oporto would of necessity soon be raised. Wagons full of sick were arriving from all quarters. It is even said that some advanced works in front of Lisbon are about to be thrown up, in the event of Don Pedro's marching upon the capital."

Sir Walter Scott.—The Queen of Spain is the only one of the crowned heads of Continental Europe who has hitherto subscribed to the monument to be erected in memory of Sir Walter Scott.

Odd Combination.—Under this head, an English paper copies from an American one, an account of a meeting held at Troy to promote female education in Greece.

Young Ladies for sale.—In one of the Calcutta newspapers the following advertisement appeared—"Be it known that six fair pretty young ladies, with two sweet and engaging young children, lately imported from Europe, having the roses of health blooming on their cheeks, and joy sparkling in their eyes, possessing amiable manners, and highly accomplished, are to be raffled for next door to the British Gallery. Scheme, twelve tickets at twelve rupees each."

Blasting Rocks under Water by means of the Diving Bell.—Three men are employed in the diving bell: one holds the jumper, or boring-iron, which he keeps constantly turning; the other two strike alternately quick smart strokes with hammers. When the hole is bored of the requisite depth, a tin cartridge, filled with gunpowder, about two inches in diameter, and a foot in length, is inserted, and sand placed above it. To the top of the cartridge a tin pipe is soldered, having a brass screw at the upper end. The diving-bell is then raised up slowly, and additional tin pipes with brass screws are attached, until the pipes are about two feet above the surface of the water. The man who is to fire the charge is placed in a boat close to the top of the tube, the top of which a piece of cord is attached, which he holds in his left hand. Having in the boat a brasier, with small pieces of iron red hot, he drops one of them down the tube; this immediately ignites the powder, and blows up the rock. A small part of the tube next the cartridge is destroyed; but the greater part, which is held by the cord, is reserved for future service. The workmen in the boat experience no shock; the only effect is a violent ebullition of the water arising from the explosion; but those who stand on the shore, and upon any part of the rock connected with those blowing up, feel a very strong concussion. The only difference between the mode of blasting rock at Howth and at Plymouth is, that at the latter place they connect the tin pipes by a cement of white lead. A certain depth of water is necessary for safety, which should not be less than from eight to ten feet.—[Repertory of Patent Inventions.]

From Liberia.—The ship *Lafayette* was below on Saturday from Liberia, via St. Thomas. Capt. Hardie came up in the Norfolk steamboat. He reports that the Colony was healthy at the time of his sailing. Dr. Mechlin, the Colonial Agent, had succeeded in concluding a treaty with the people of Grand Bassa, and had returned to the Colony in safety.—[Baltimore American.]

[From the *Charleston Patriot* of April 1.]

FROM THE WEST INDIES.—By the schr. *Naomi*, Captain Lubbock, from Dominica, we have the Colonist, of the 9th ult. The only item of intelligence it contains is an account of several shocks of an Earthquake, in the Island of St. Christopher commencing at 8 o'clock on the night of the 8th March, and continuing with little intermission for eight days, during which time the inhabitants of St. Christopher were kept in a state of constant terror. All the stores of St. Christopher were closed and many of the residents fled for refuge on board the vessels in the harbor.

The injury (says the Dominica Colonist) done to the Buildings in Casseterre is very great—there is scarce a stone building or store we think, that has not been injured in some degree; and several old walls and chimneys have been thrown down. The Church, the Wesleyan Chapel, the Jail, the Custom House, the Reading room, the Tavern, have all received damage, and several private dwelling houses have been so shaken as to cause the walls to separate in many places. The Parish Church of St. Thomas, Middle Island has suffered materially.

The works on several of the Estates have been much rent—particularly those on the *Spring Lodge Otley's (Cayon)* and *Olivees*, with many others that we have not yet had an accurate account of; and several chimnies and walls were thrown down.

A considerable quantity of bottled liquor was destroyed, by the first shock of the earthquake—the value, supposed to be some hundred pounds sterling.

At no period since the awful visitation of 1797, when a dreadful convulsion in South America, destroyed many cities, and buried in the ruins some thousand of persons, and which was severely felt here, have such severe shocks been remembered in this island. We remember many shocks which caused a momentary alarm, but no injury was sustained, and there was no repetition of them, so as to create any apprehension.

The shocks of earthquake, we understood, were sensibly felt at Nevis. At Antigua, it is stated, they were very slight. By the Mail Boat, from St. Thomas and Tortola, we learn, that at those Islands they were not at all felt.

The Cholera appears to be making sad ravages at the Havana. The news in the annexed extracts, from the *Baltimore Chronicle* of Saturday, is later by a week than our previous accounts. Still no one who remembers the exaggerated statements sent abroad of the mortality of the Cholera in this city last summer can doubt that the story of 500 deaths a day in Havana is gross exaggeration. We learn with regret, that private letters from Matanzas, speak of the disease as just appearing there.

THE CHOLERA AT HAVANA.—The schooner *Fan Fan*, at this port yesterday from Havana, brings advices to the 24th ult. The *Gazette* states that the accounts received by her represent the progress of the cholera as truly appalling. From the 24th of February till the 24th of March, five thousand, (1,000 whites, and 4,000 blacks,) had died of the disease—and on the day before the sailing of the *Fan Fan*, five hundred persons are stated to have been taken off, and nearly the same number had been buried each day for several days previously. The Captain General has issued an order, that all the artillery shall be fired at sunrise each day, in the hope of purifying the atmosphere. The Board of Health of Havana have issued an order prohibiting the sale, by the Apothecaries, of any medicines under the name of specifics for the cure of the Cholera. Several of the Apothecaries have offered to furnish medicines gratis to the poor. The Superintendents of the Hospitals make the same complaints which were urged in this country, as to the patients being brought to the Hospitals in the last stage of the disorder, and absolutely incurable.

Since the above was in type, we have received the following letter, dated

"HAVANA, MARCH 23, 1833.—The Cholera is making such ravages among our population, that business is almost entirely suspended, and the Clerks in commercial houses, brokers, and cartmen, launch men and day laborers, are unwilling to work. Our daily list of deaths, publicly known, falls not far short of 500, but it is supposed that the number is greater. Strangers are not permitted to go outside the walls, lest they should discover the mortality.

One individual has lost 50 out of 200 slaves, and nearly the whole black population has been attacked.

NEW-YORK AMERICAN.

APRIL 6, 8, 9, 10, 11, 12—1833.

LITERARY NOTICES.

A SERMON ON THE RELIGIOUS EDUCATION OF CHILDREN, by GARDINER SPRING, Pastor of the Brick Presbyterian Church in New York. New York: Jonathan Leavitt.

DOMESTIC PORTRAITURE—or the successful application of religious principle in the education of a family—exemplified in the Memoirs of three of the deceased children of the Rev. Leigh Richmond. N. York: Jonathan Leavitt.

The education of children is an inexhaustible theme. On no concern of such deep interest have more varying theories been broached, than on the proper manner of developing and properly directing the intellectual, moral and physical faculties of youth. All, or nearly all, will agree in the general results to be aimed at; but there is an infinite and irreconcilable diversity in the means proposed for attaining them. Hence, as well as from the intrinsic importance of the topic, there can be but few higher or more fitting objects of solicitude to the faithful pastor of a church, than that the children of those to whom he ministers should be early taught to walk in the right way. To such a feeling as this do we owe the Sermon of Dr. Spring—and to a somewhat similar feeling the other publication from the same press, which we have named with it at the head of these remarks. The general views of Dr. Spring in regard to the special objects to which the attention of parents should be early directed in the education of their children, command our entire assent. The habit of subordination, a sacred regard to truth, industrious habits, temperance, caution in the selection of associates, respect for the sabbath, judicious instruction in the estimate to be formed of the world,

and a spirit of benevolence—all these cannot be too strongly inculcated and required—but the manner in which most surely to inculcate them with success and acceptance on the part of the learner, constitutes the whole difficulty of education. Both Dr. Spring and the gentle and highly gifted Leigh Richmond insist, and wisely and truly insist upon the inappreciable importance of making *home* the happiest place to the children of a family. "Every family," says Dr. Spring, "ought to be a little world within itself. Absolute exclusion from the world is undesirable; but if I mistake not those families are best educated, and exhibit most of moral feeling, that are most tenderly attached to home." So in regard to Mr. Richmond's views: the editor of "the Domestic Portraiture" tells us, "Mr. Richmond's first object was to make home the happiest place to his children; to render them independent of foreign alliances in their pursuits and friendships; and so to preclude the feeling too common in young people, of restlessness and longing to leave their own firesides, and wander abroad in search of pleasure and employment."—Even this object however must be effected by attraction and not by prohibition, by rendering home more agreeable than other places, not by denying the opportunity of instituting any comparison.

Among the measures to be adopted for accomplishing the great ends of education, Dr. Spring lays great and deserved stress upon the force of example. "Be yourself what you wish your child to be," it is justly said, "is perhaps the most weighty axiom in the education of children. Example influences, long before instruction can inform, or authority can bind. Precept constrains, example allures; precept compels, example persuades; precept is a dead, example is a living law." And herein in truth consists the great difficulty of the task of education, for most parents, and instructors. It requires a degree of self-denial, forbearance, constant watchfulness of one's own acts and expressions, which few can practice, and which it is nevertheless most dangerous to forego. We must be indulged with making an extract from the view of this subject, so well put by Dr. Spring:—

Children are imitative beings; and few persons are aware how soon they understand the import of what they see and hear. The example of an affectionate and watchful parent can scarcely fail of exerting a most insinuating and powerful influence. No child is too young to be the accurate observer of its parent's conduct, and to be purified, or contaminated, by his example. The remark cannot be too strongly enforced on parents, that however insensibly, they are incessantly moulding the minds, the habits, the character of their children, by the power of their example.

You do not mean that your child should possess an unyielding, imperious, spirit; that he should be overbearing and contemptuous; or that he should be unkind, unamiable, and uncourteous. But what if he discovers in you a hasty, uncontrollable, temper what if he sees that you are haughty and disdainful; that you are fond of sharp contention, and disregard all the laws of kindness and courtesy: the effect will be, in spite of all your efforts, that your example will be the governing motive of his conduct. You do not wish to see your child idle and slothful, and afraid of toil and hardship. But what if you yourself are a man of fashion and leisure; what if your child suspects that you do not deem it reputable to labor; and that instead of redeeming your time, and being diligent and unwearied, you are satisfied with living at your ease: is it very probable, that your child will aspire to great activity, energy and usefulness? You desire that your child should be a man of honorable feeling and unbending veracity; that he should be punctual in his engagements, and thorough in his business. But, if while he hears you commending and extolling these virtues, he knows that you descend to what is little and mean; that you are disingenuous, equivocal, and false; that you are loose and immethodical: will not your habitual conduct be apt to have more influence with your child, than your most positive precepts? You wish your children to be discreet in the choice of their associates. But what if you

yourself are devoted to dissipation and convivial intercourse; what if you occasionally resort to corrupt and corrupting society; what if you are thus most effectually alluring your children to become the victims of sense and sin? You would not wish your child to be an atheist, or an infidel. But what if he hears you sometimes expressing your doubts, whether there be any such being as God; whether there be any difference between what is right and what is wrong, except what arises from customs, or education; whether there be a world of everlasting retribution; and whether, after all, the Bible may not be a cunningly devised fable; would it be surprising, if your child should be deeply imbued with this unwholesome scepticism? You who profess to be Christian parents, wish to lead your children to seek first the kingdom of God and his righteousness. But what if they discover, that you yourselves, are conformed to this world; that your great object is to be rich and splendid, and to seek the honor that cometh from men; that you are influenced more by the maxims of fashion and the approbation of the world, than by the approbation of God and the unerring judgment of his word: will you have any just ground for disappointment, if your example defeats your instructions?

We would gladly pursue this subject, but are admonished that others claim our notice, and therefore take leave of these two publications, with sincere respect for their authors, and excepting some matters of detail, with general assent to their opinions.

LORETTE—The History of LOUISE, Daughter of a Canadian Nun: exhibiting the Interior of Female Convents. New York: Wm. A. Mercein.—This is a most reprehensible publication, and quite unfit to be introduced into any family. It is intended as is professed, to unveil the depravity of Catholic Convents, and Confessors in Canada; and in order to do so, a tale of gross, incredible, and revolting depravity is invented, which becomes the more shocking from the mingling up with it of religious dissertations.—We are ashamed that the New York press should have ushered such a publication to the light.

SEMI-SERIOUS OBSERVATIONS OF AN ITALIAN EXILE, DURING HIS RESIDENCE IN ENGLAND. By Count PECCHIO.—Philadelphia: Key & Biddle. N. York, D. Appleton.—The Lions have turned Painters, and they who have heretofore enjoyed the monopoly of delineating the characteristics of others, are themselves at last subjected to frequent and unsparing scrutiny and exhibition. After Prince Puckler, this lighter little book of the Italian Count must have been felt by the English themselves as merciful. It is amusing, original, and short—and will be read with pleasure here.

ENCYCLOPEDIA AMERICANA, Vol. XIII. Philadelphia, CAREY, LEA & BLANCHARD.—With this volume closes this most useful and valuable publication, which, as in its progress we have had repeated opportunities of praising, we now, that it is finished, commend to all who can afford any sort of library, as an indispensable work. On any and every question that can arise and lead to discussion, in government, religion, morals, science, philosophy, politics, biography, or as to the ordinary occupations of men, whether professional, agricultural, commercial, or mechanical, there is scarcely any general principle or leading fact, which will not be found either illustrated in this volume, or so referred to, as to show where a further illustration is to be found. Brought down, too, as it is, to our own times, and adapted to our own country, we do bare justice only to the publishers and editors when we say, they have given us a work of universal, lasting, and unquestionable utility.

PARLEY'S MAGAZINE, No. 1: Boston, Lilly, Wait & Co.—Peter Parley's tales and travels have amused many a youth. This magazine is intended in the same familiar way, to attract the attention of those who do not like to read as a task, and to induce them to read for pleasure. It is to be published semi-monthly, and will treat of the manners and customs of foreign

countries, of voyages and travels, of natural history,—sometimes interesting stories, sometimes explanations of various trades and pursuits will enliven its columns, which will be illustrated with abundant engravings: the whole at the price of one dollar per annum. This number before us, which is a specimen number, affords great promise of usefulness and sound instruction, by the dissemination in plain language and in short narratives, of things meet to be known. A contemporary, we observe, expresses apprehension that religion is not to be acknowledged in this publication; but on the very first page of the magazine in the address to the public, explanatory of the little medallion prints on the cover, it is said—"One of these round pictures is a church; by which I intend to tell you, that in my pages you will occasionally see something about religion, and those duties and pleasures which spring from it."

We are much pleased ourselves with this little Magazine, and hope it may succeed.

THE TOILETTE OF HEALTH, BEAUTY AND FASHION, &c., &c.: Boston, Allen & Ticknor; for sale in N. York by John Wiley, Nassau street.—There are mysteries developed in this little volume, which far be it from us to quote; but one might almost suspect that beauty, either male or female, is, if this record be accurate, a more artificial concern than simple men suppose.

AMERICAN QUARTERLY TEMPERANCE MAGAZINE.—No. I.—We give a part of the Introductory to this new periodical, as expressing with clearness and precision the objects and mode of proceeding of the friends of the noble cause of temperance.

"The end aimed at, we believe to be, not an individual, a local, or a sectional interest. The members of this society are banded and pledged, it is true, but to the pursuit of no doubtful object. They are leagued for the support of one great maxim, a plain and simple principle, not only consistent with, but as they suppose, inseparable from, the prosperity and welfare of all.

The appeals they propose to make, like those heretofore so often repeated, they would address to the understanding and conscience of their fellow citizens, not with the design to foster any peculiar set of opinions, or to engage support for any favored order of men. Their invitation is not a call to enter any field of vague discussion, or of party or sectarian strife. They seek not to assemble men together in crowds, that the artful and designing may ride on their shoulders into places of power or profit. They demand no relinquishment of true and substantial independence—no burdensome sacrifice of time and money; their pledge imposes no inconvenient or useless observance of rites and ceremonies, days and seasons; requires no qualifying test but the simple promise to abstain from the use of *proved, denounced, and detested* poison. This it is, and no more. There is nothing kept back, no concealed machinery, no hidden wires, by which those who engage to support temperance, can be made to play an unconscious part in other game. The associated friends of Temperance, who adopt this method of addressing the public, rely for success upon the intrinsic merit of their cause. They have but a single design, and that is of easy comprehension. * * * They would inculcate wisdom and prudence, with the hope that the sum of happiness may be thereby increased. If a man is in health, they request him to do what he can to remain so; of the strong man they ask the preservation of his strength; of the wealthy to maintain and secure his independence; of him who has character and influence, to use those advantages for the good of his companions, that they may be continued to himself; of the poor and unfortunate, they require nothing but to take hold of the friendly hand that is stretched out for their relief, and by a moderate exercise of self control and an easy aspect, assist to advise themselves to competence and comfort.

In its organization, the Society is strictly republican. Its basis is the principle, that the proper end of Government and of all human institutions, is to secure the greatest amount of happiness; that to be competent to the duties of self-government, men need only be virtuous, and to be virtuous they need only be enlightened.

The second article contains a correspondence between his Prussian Majesty's Consul and the Executive Committee of the New York State Temperance Society, requesting on the one part and furnishing on the other, for the use of the Prussian Government, information relative to "the great temperance reformation which is now scattering its rich and precious blessings throughout all the States of the American Republic."

Article 3d, some lines "on the sale of ardent spirits by christians." Article 4th, "causes which oppose the Temperance Reform." Fifth, sixth, "Medical advice," "Pathology of Drunkenness," &c. &c.

We recommend this truly philanthropic production to those who are, as well as those who are not, convinced what great results may be expected by united acts in this noble cause. Whatever profit may arise from its circulation, will be carefully devoted to the furtherance of the great object of the society.

TRAVELS AND RESEARCHES OF Von Humboldt, Harper's Family Library No. 64.—Familiar as is the name of this illustrious individual to the lovers of science throughout the world, his writings, from the form in which they have appeared, have never enjoyed that general circulation which their interest and importance should command. The splendid folio edition of his works (*Voyage de Humboldt et Bonpland*) which appeared at Paris, Hamburgh, and London in 1810, a work to which, like that of our own Audubon, "the modern literature of Europe can hardly, in gigantic extent and richness, offer a parallel," is of course far beyond the means of the majority of readers, while other editions have not, as we are aware, been much circulated in this country. The present abridgement therefore is both highly acceptable in itself, and a most valuable addition to the "Library" of which it here forms a part. Like all abridgements, however, by other hands than those of the original author, it is in its very nature somewhat crude and unsatisfactory. The general information, and even the minute details of facts, experiments and scientific observations, made by the great naturalist in his celebrated expedition over the southern part of this continent, seem to have been retained: But the eloquent and glowing description, the learned dissertation, and the animated narrative of Humboldt, is missing, only enough being retained in his exact words, to give the reader of this epitome an eager desire to go at once to the fountain head of the information it embraces. Still within the same limits to greater advantage, the original work could hardly have been compressed, and as those limits are nearly the same as have been prescribed for all the books which make up the Family Library, it is unfair to make that an objection to a single work which is one of the greatest recommendations of the whole collection—brevity and comprehensiveness. With these passing observations about the work before us, we will endeavor, with the assistance of a memoir of Humboldt, now before us in another shape, briefly to sketch a portion of the labors of the hero and subject of it, during his arduous tour through the remote and secluded regions of South and of Central America.

It was in July, 1799, that Humboldt and his companion Bonpland landed at Cumana, in South America, and after botanizing on the summit of Ceripa and Silla de Avilla, proceeded into the interior to the Equator. They then traversed the plains of Calabozo and Apura, and entered upon a voyage of 500 leagues, performed in canoes. Descending the Rio Apura to its junction with the Orinoco, they ascended the latter to the mouth of the Guaviare, and then followed up the streams of the Atahapo Tuamini and Temi; and carrying their canoes through the thick forests of the country, they descended the Rio Negro to the boundaries of Grand Para, in Brazil, and after undergoing incredible hardships, and being prevented by the ferocious Guararibes from reaching the sources

of the Orinoco, which they had again struck, by passing through the Cassiquiare, they returned upon the former stream to Cumana: Having, with the assistance of chronometers of Jupiter's satellites and the moon's amplitude surveyed a great portion of this immense extent of country, and made many interesting scientific observations upon a variety of natural phenomena in those regions. After spending some time, partly on the coast, and partly among the West India islands, in arranging their notes and collections and adding to their stores of observation, these enterprising naturalists embarked again for the Main; and indulging their love of nature and taste for botany in the magnificent forests of Turbaco, they descended the river Magdalena and travelled on foot through the woods, reached the centre of New Granada, pushed on through the continuous rains of the wet season to Quito, crossed the Andes near the snow capped summits of Tolina, and wandering thro' the province of Choco, scaled the volcano of Sotara, and looked into the boiling cauldron of hissing water that steams up through the snow-crowned crater of Purace. The gold washings of Quilichao, the wax-palms and gigantic passion flowers of Tolina, and the poisonous vale of Patia, were successively left far behind, and the precipitous Cordilleras of Almaguer opposed no obstacle to those who, after a short rest at Ibarra, scaled the burning Pichincha, and left their foot prints in the eternal snows of Cotopaxi and Chimborazo, where the blood started from their eyes and gums, and their muscles grew rigid with the intense cold. But our limits will not allow us to follow the adventurous Philosophers through half of that wonderful career, where every step was marked with daring enterprise, and every pause with scientific observation. In all these rich and stupendous regions, they found time and opportunity, amid every disadvantage of travelling through a country so little civilized, to conduct their researches, and make their scientific observations, with as much coolness and success as if experimenting in a laboratory or museum at Paris. At one time we find them studying the mines of Mariquita, or dissecting Caribbean mummies in the cave of Atarnipo; at another, ascertaining the composition of the air at the mouth of a volcano; and again taking a trigonometrical survey from the crest of a glacier; now finding the astronomical situation of the Chamaya at its junction with the Amazon, while floating on a raft on its bosom; now wading through the snowy fields of Assonay, and piercing the dense forests of Gonzanama to study the productions of the vegetable kingdom, and again plunging to the bottom of the crater of Joruli to analyze the gases which exude through the thousand crevices of the Aetna of Mechoachan. Labors and researches, which, for their stupendous and comprehensive character, deserve the epithet of *Herculean*, more than those of half the conquerors that ever strode over the nations, and left dismay and desolation in their path. How much more indeed, is that hardihood and daring adventurousness, that deep and still determination of character, to be admired, which carries a man like Humboldt or Audubon to the depth of the wilderness, and sustains him amid all the dangers and privations of such solitudes, while pursuing his lonely career of useful inquiry, to the drunken valor of him, who, to the inspiring sound of drum and trumpet, hurries amid thousands of excited beings like himself, to bring war and destruction on his fellows? The courage of the one lies in meeting, before the eyes of a gazing and admiring world, the conflict of the elements he has himself set in motion; the daring of the other consists in braving the convulsions of nature herself, and battling with floods and snows, with the tornado and the thunderbolt, the lava torrent and earthquake—far away from the cheering sympathies of his fellows, and where no

eye can sparkle for his success, or grow dim at his discomfiture, and no heart can beat with interest for his fate till long after it may have overtaken him,—where there is nothing but the intense love of nature, and the invigorating influence of his own free thoughts to bear him up against the thousand perils that assail his "unhoused condition."

But our pen, like an arrow sent on an aimless errand, is unconsciously shooting beyond our limits; and the length to which this notice is already protracted, has usurped the room allotted to us for several other works still on our table,—all of which shall be properly cared for next Saturday. But we must add, what our readers will agree with us in rejoicing at, that *Gulian C. Verplanck* and *Wm C. Bryant* have undertaken to edit the forthcoming volume of the writings of the late *Robert C. Sands*. It is a gracious office on their part, to a man of kindred genius, prematurely cut off—and will be duly appreciated, as well by the public, as by his friends.

POETRY.

[FOR THE NEW-YORK AMERICAN.]
RESEMBLANCES.

"Catch [if you can] the Gynthia of the minute!"

Her heart is like a harp whose strings
At will are touched alike by all—
Her heart is like a bird that sings
In answer to each fowler's call—
That harp has still one secret tone
Reserved for master hands alone—
That bird has still one meaning note
Which only toward its mate will float.

Her heart is like a gallant bark
Whose hold with precious freight is stowed
While on the deck you only mark
Traces of a less costly load.

That bark her course will sometimes veer,
As if no hand were there to steer,
But yet the pilot does not sleep
That guides that vessel o'er the deep.

Blest will he be, whose listening ear,
Thrilling to sounds that none have heard,
Shall in their finest cadence hear
The music of that harp and bird.

But, lady, more will envy him
For whom that freighted ship may swim—
Who, by the light of those bright eyes,
Shall steer to port his noble prize.

A VOICE FROM THE WINE PRESS.

By Miss H. F. Gould.

'Twas for this they reared the vine,
Fostered every leaf and shoot,
Loved to see its tendrils twine,
And cherished it from branch to root!

'Twas for this, that from the blast
It was screened and taught to run,
That its fruit might ripen fast,
O'er the trellis, to the sun.

And for this they rudely tore
Every cluster from the stem;
'Twas to crush us till we pour
Out our very blood for them.

Well, though we are tortured thus,
Still our essence shall endure,
Vengeance they shall find, with us,
May be slow, but will be sure.

And the longer we are pent
From the air and cheering light,
Greater, when they give us vent,
For our rest shall be our might.
And our spirits, they shall see,
Can assume a thousand shapes;
These are words of verity,
Uttered by the dying grapes.

Many a stately form shall reel,
When our power is felt within;
Many a foolish tongue reveal
What the recent draught has been:
Many a thoughtless, yielding youth,
With his promise all in bloom,
Go, from paths of peace and truth,
To an early, shameful tomb.

We the pure will oft unclasp,
All its golden treasure take,
And, the husband in our grasp,
Leave the wife with heart to break.
While his babes are pinched with cold,
We will bind him to the bowl,
Till his features we behold
Glowing like a living coal.

We will bid the gown-man put
To his lap a glass or two,
Then we'll stab him in the foot,
Till it oversteps the shoe,
And we'll swell the Doctor's bill,
While he parries us in vain;
He may cure, but we will kill
Till our thousands we have slain.

When we've drowned their peace and health,
Strength and hopes within the bowl,
More we'll ask than life or wealth,
We'll require the very soul!
Ye who from our blood are free,
Take the charge we give you now;
Taste not, till ye wait and see
If the grapes forget their vow.

METEOROLOGICAL RECORD, KEPT IN THE CITY OF NEW-YORK.

For the Week ending Monday, April 8th, 1833.

[Communicated for the American Railroad Journal.]

Date.	Hours.	Barometer.	Thermometer.	Winds.	Strength of Wind.	Clouds from what direction.	Weather and Remarks.
Tuesday, April 2	6 a. m.	30.10	45	N-NNE	faint		clear—moderately smoky (dry fog)
	10	15	56	NE-ESE	light		fair
	2 p. m.	12	62	ESE—SE by E	..	WSW	..
	6	10	56	ESE	..	..	..
Wednesday, 3	6 a. m.	10	50	E	..	..	..
	10	09	44	NE-E	..	SSW	cloudy
	2 p. m.	01	57	ESE—SSE	mod.	SSW	..
	6	00	55	..	..	SSW	—rain
Thursday, 4	6 a. m.	29.91	54	..	fresh	SSW	rain
	10	75	52	..	faint	..	cloudy and foggy—rainy
	2 p. m.	72	56	SSE—SW	..	SSW—W—SW	cloudy—fair at 1 p. m.
	6	65	60	SW	light	WSW	fair
Friday, 5	6 a. m.	67	57	..	..	WSW	..
	10	61	53	W—WNW	moderate	..	—light smoke
	2 p. m.	71	56	WNW—NW	..	NW	..
	6	75	58	NW—NW by W	fr'h mod.	..	..
Saturday, 6	6 a. m.	85	50	NNW	moderate	..	..
	10	90	47	..	..	..	clear
	2 p. m.	30.02	43	NNW—N	light	..	..
	6	09	50	N—SW	..	..	..
Sunday, 7	6 a. m.	08	60	SSW	..	..	..
	10	05	55	S by W	..	WSW	fair
	2 p. m.	10	49	..	..	..	..
	6	18	46	S by W—SE	..	WSW	—light smoke
Monday, 8	6 a. m.	20	56	SE	..	WSW	—smoky and hazy
	10	18	56	SE—ESE	mod-fr'h	WSW	cloudy
	2 p. m.	07	50	ESE	fresh	SSW	..
	6	29.98	50	..	strong	..	—rain
Tuesday, 9	6 a. m.	70	50	..	light	..	cloudy and foggy
	10	66	54	SE	..	..	rainy
	2 p. m.	62	56	variable	faint	SSW—WSW	fair
	6	60	59	..	calm	WSW	..
	10	65	49	..	..	..	..

Average temperature of the week, 53.22

Note.—In the Meteorological Table in our last number, in speaking of the Winds for March, it should have read "South westerly, including S. 49°; and North westerly, including W. 47°."

MARRIAGES.

On Wednesday evening, by the Rev. Wm. Quarter, Mr. Edward Croft, to Miss Maria, second daughter of Mr. Andrew Fallon.

In Moore county, North Carolina, on the 7th inst. by Malcolm Blue, Esq. DANIEL D. PATTERSON, Esq. measuring 4 feet 10 inches in height, to Miss MARY McFARLAND, measuring 6 feet 4 inches, both of Richmond county.

DEATHS.

On Tuesday evening, MARY, wife of Samuel D. Wilkins, of Geneva, L. I. and daughter of Nehemiah Denton, Esq.

This morning 10th inst., JOHN W. STEVENSON, son of the late Frederick F. Stevenson, in the 23d year of his age.

Last evening, after a short illness, SAMUEL JUDS, son of Jas. F. Penland, aged eight months.

On Saturday night 6th inst., I. I. SAUTER, (of the firm of Ham & Sauter.)

On Sunday 7th inst., after a short and severe illness, in the 86th year of his age, Mr. ARCHIBALD NISBET, a native of Scotland, and for the last 40 years a resident of this city.

On Saturday morning 6th inst., of consumption, SYLVIA, wife of Timothy Dewey, aged 44 years.

On Sunday, of Dropsy, WILLIAM L. ROSE, Esq. in the 50th year of his age.

Monday, 8th inst., A. OBERTRUFER, of Switzerland.

On Monday morning, 8th inst., Mr. LOUIS CHARIVIER, a native of France.

Tuesday morning, 9th inst., after a lingering illness, Mr. GEORGE COOK ABEL, in the 21st year of his age.

Monday evening, 8th inst., of a lingering illness, Mrs. BRIDGET MURPHY, widow of the late Dennis Mehan, in the 47th year of her age.

Saturday morning, 6th April, after a long and painful illness, Mrs. MARTHA RODGERS, in the 55th year of her age.

On Friday evening, 5th April, Miss ANN LAMB, aged 90 years.

On Wednesday the 3d inst. Mrs. ANNA McVICKAR, relict of the late John McVikar, of this city, in the 73d year of her age.

In Chillicothe, Ohio, on 23d March, after a severe illness of about four weeks, Mr. ROBERT KIRCHVAL, Editor and Proprietor of the Scioto Gazette, in the 45th year of his age.

At Oxbow, Jefferson Co. N. Y. on the 16th ult. Mrs. C. C. HOWELL, aged 34 years, wife of the late Henry Howell, of Tully, N. Y.

At Albany, on Monday, HANNAH TYLER, daughter of Benj. F. Butler, in the 6th year of her age.

On Thursday last, at the National Hospital, (Norfolk) after a protracted illness of a pulmonary character, Lieut. JOSEPH M. NICHOLSON, of the U. S. Navy, a native of Maryland. Lieut. N. had been many years in the public service, and was favorably known as an officer faithful in the discharge of his duty.

REPORT OF DEATHS—WEEK ENDING SATURDAY, APRIL 6.

Between the ages of			
90 and 100—	0	50 and 60—	5
80 and 90—	0	40 and 50—	11
70 and 80—	3	30 and 40—	14
60 and 70—	6	20 and 30—	13
50 and 60—	1	10 and 20—	3
40 and 50—	1	0 and 10—	5
30 and 40—	1	0 and 10—	5
20 and 30—	1	0 and 10—	5
10 and 20—	1	0 and 10—	5
0 and 10—	1	0 and 10—	5
Of and under one year, 25—Total, 105.			

DISEASES.

Apoplexy.....	2	Inflammation of bowels....	4
Burned or scalded.....	1	Inflammation of brain....	4
Cancer.....	1	Intemperance.....	2
Casualty.....	3	Killed or murdered.....	1
Consumption.....	31	Maremsus.....	2
Convulsions.....	8	Measles.....	1
Diarrhoea.....	1	Old age.....	1
Dropsy.....	2	Palsy.....	1
Dropsy in the head.....	7	Peripneumony.....	6
Drowned.....	3	Pleurisy.....	1
Dysentery.....	1	Pneumonia typhodes.....	1
Fever, puerperal.....	2	Stillborn.....	8
Fever, scarlet.....	1	Tabes mesenterica.....	1
Fever, typhus.....	1	Teething.....	1
Hemoptysis.....	1	Unknown.....	3
Hives or creup.....	2	Worms.....	1

ABM. D. STEPHENS, City Inspector.

WANTED.

200 MEN, and 100 HORSES and CARTS, to work on the Troy and Bennington M'Adam Turnpike. Apply to WALLACE & ANTHONY, 136 North Second street, Troy.

GRACIE, PRIME & CO., 22 Broad street, have on hand the following Goods, which they offer for sale on the most favorable terms, viz:

200 qr casks Marcelline Madeira, entitled to debenture	
100 cases White Hermitage	
50 do. Bordeaux Grave	
4 cases Gam Arabic	
2 cans Oil of Orange	
2 casks French Madder, ESFF	
10 do. do. SFF	
10 do. Danish Smalts, FFFE; 20 do. Saxon do.	
5 do. Small do.; 20 kegs Tartaric Acid	
200 kegs Saltpetre	
200 bales superior quality Italian Hemp	
20 tons Old Lead	
300 barrels Western Canal Flour	
400 do. Richmond country do.	
100 bales Florida Cotton; 20 do. Mexican do.	
20 do. Sea Island do.	
300 do. Lehigh Rags, No 1.	
100 do. Trieste do. SFF	
100 do. do. do. FF	
12 boxes Maraschino Cordials	
350 lbs. Coney and Hares-back Wool, for Hatters	
80 M. English Quills.	

DRY GOODS—by the package.

20 cases white and dark ground, fancy and full Chintz Prints, all new styles, received per Napoleon.	
9 do. assorted colored Circassians	
15 do. do. do. Morinos	
4 do. Italian Lustrings	
1 do. 35 inch Cravats	
10 do. Jet black Bombazines	
8 do. Printed border Handkerchiefs	
2 do. White Diamond Quiltings	
2 do. Furniture Dimities	
2000 pieces Engl. Brown Shirtings, 23 in.	

NEW-YORK FARMER AND AMERICAN GARDENER'S MAGAZINE.

Whole number, Vol. 6. New Series, Vol. 1. This is an AGRICULTURAL periodical, published monthly, containing 32 large quarto pages of three columns each, devoted particularly to Agriculture, Horticulture, &c. It will also contain much interesting matter upon other subjects, such for instance as road making and repairing, together with steam carriages for common roads, with other modes of improving internal communication. Its main object, however, is to collect from those who cultivate the soil scientifically, and observingly, and to disseminate such information as may tend to improve the mode of cultivation throughout our widely extended country. No person will deny the utility of such a publication properly conducted; nor will any one doubt me when I say that such a paper cannot be properly conducted and handsomely executed, without an extensive circulation and prompt payment to meet its expenses.

Terms, Three Dollars per annum, in advance; and will not be sent without, as, at its present price, it will not pay a commission for collecting, nor bear the loss arising from want of punctuality on the part of subscribers.

D. K. MINOR, Proprietor,

35 Wall street, New-York.

PAPER.

THE SUBSCRIBERS, Agents for the Saugerties Paper Manufacturing Company, have constantly on hand an extensive assortment of Royal, Medium, and Imperial Printing Paper, all made from first quality Leghorn and Trieste Rags. All contracts made after this date, will be furnished with 480 perfect sheets to the ream; and all sales amounting to over \$100, of Medium or Royal, out of that part of the stock which includes cassia quires, the purchasers will be allowed an extra quire of perfect paper to each double ream, with additional allowances to the publishers and the trade, who buy largely. The terms will be liberal. Apply to GRACIE, PRIME, & CO.,

J31 22 Broad Street.

TOWNSEND & DUFFEE, of Palmyra, Manufacturers of Railroad Rope, having removed their establishment to Hudson, under the name of Duffee & May offer to supply Rope of any required length (without splice) for inclined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the U. States. As to the quality of Rope, the public are referred to J. B. Jervis, Eng. M. & H. R. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbondale, Luzerne County, Pennsylvania.

Hudson, Columbia County, New-York,

January 29, 1833.

f31 ft

ENGINEERING AND SURVEYING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,
Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1832.

In reply to thy inquiries respecting the Instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely anything to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to lateral angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying of rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLE, Superintendent of Construction

of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years used constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.

Germantown, and Norristown, Railroad.